JSL/JRD/ENV/2022-23/07

Date: 24.05.2023

To

Joint Director
Ministry of Environment, Forest & Climate Change
Regional Office (EZ)
A/3, Chandrasekharpur
Bhubaneswar-751023

Sub: Half Yearly Compliance Report of Environment Clearance for the period from October, 2022 to March, 2023.

Ref: 1. Environment Clearance vide Letter No. IA -J-11011/281/2007-IA-II (I), dated 01.06.2022 for expansion of crude steel production from 2.2 to 4.5 MTPA and Cold Rolling Mill from 1.6 to 2.6 MTPA.
2. Environment Clearance vide Letter No. J-11011/281/2007-IA-II (I), dated 18.09.2019 for expansion of stainless steel production from 0.8 to 2.2 MTPA and Cold Rolling Mill from 0.8 to 1.6 MTPA.
3. Environment Clearance vide Letter No. IA-J-11011/281/2007-IA-II(I), dated 17.05.2018 for 1.6 MTPA Integrated Stainless Steel Plant.
4. Environment Clearance vide Letter No. IA-J-11011/281/2007-IA-II(I), dated 01.11.2007 for 1.6 MTPA Integrated Stainless Steel Plant.
5. Environment Clearance vide Letter No. IA-J-13011/05/2006-IA-II(I), dated 30.11.2006 for 2x125 MW Captive Power Plant.

Dear Sir,

With reference to the above Environment Clearances, please find enclosed herewith the half yearly compliance report of the stipulated conditions as per Environment Clearance granted for the period from October, 2022 to March, 2023.

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

Thanking You,

Yours faithfully,
For **Jindal Stainless Limited**

Deepak Agrawal
Unit Head

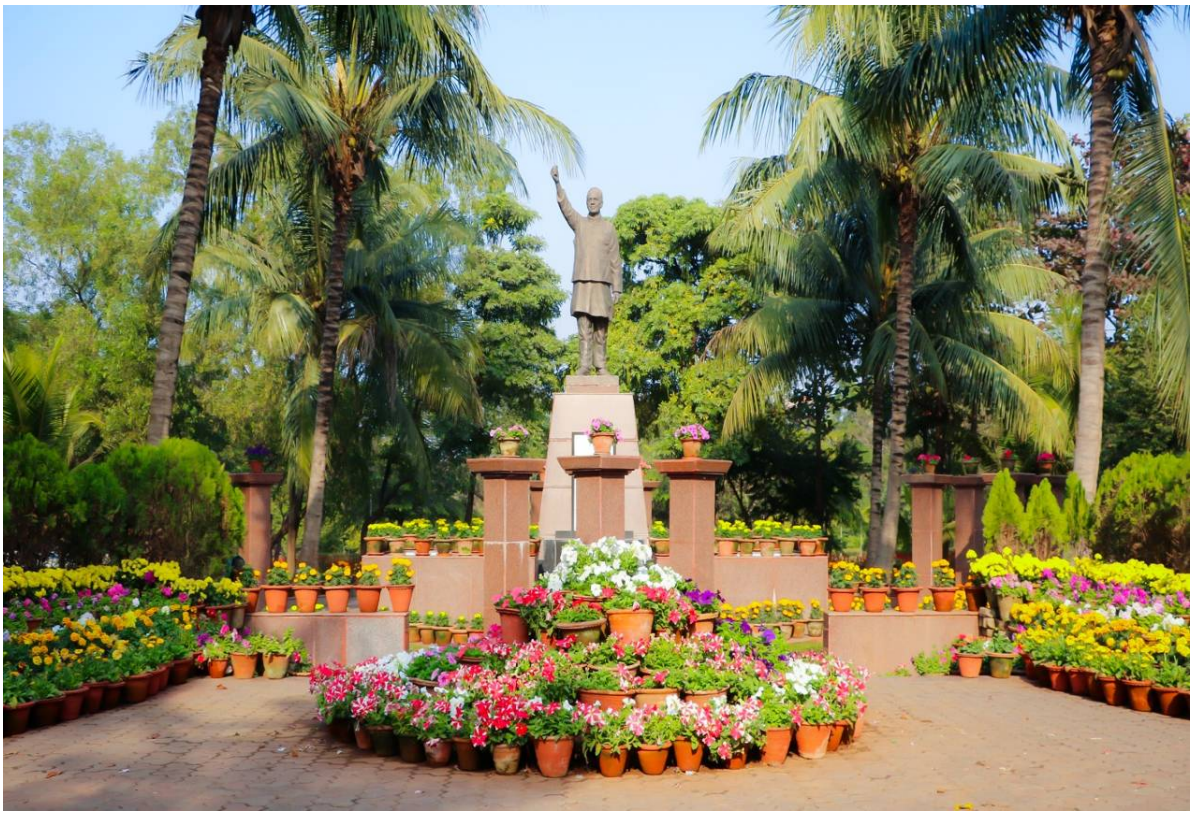
GOVT. OF INDIA
MoEF & CC Integrated R.O.
Bhubaneswar-751023
31 MAY 2023
RECEIVED

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
3. The Member Secretary, State Pollution Control Board, Odisha, A/118, Nilakantha Nagar, Unit – VIII, Bhubaneswar - 751012

M/S. JINDAL STAINLESS LIMITED



HALF YEARLY EC COMPLIANCE REPORT

OCTOBER, 2022 TO MARCH, 2023

M/s. JINDAL STAINLESS LIMITED

Kalinganagar Industrial Complex, Duburi, Dist. Jajpur - 755026, Orissa, India

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STATUS OF COMPLIANCE OF ENVIRONMENT CLEARANCE CONDITIONS OF EXPANSION OF CRUDE STEEL PRODUCTION FROM 2.2 MTPA to 4.5 MTPA and COLD ROLLING MILL FROM 1.6 MTAP to 2.6 MTPA
REF: IA -J-11011/281/2007-IA-II (I), Dated. 1st June, 2022

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.	**Being Complied.** JSL has planted 3,46,154 nos. of trees covering an area of 156.61 Ha (about 35.8 % of the total area) of green belt inside the plant premises. However 11383 nos. of tress have been planted for gap filling in FY 2022-23. Further Avenue Plantation of about 159180 nos. samplings have been made outside the plant & 95999 nos. samplings have been distributed at free of cost to the nearby villages and educational institutions.
ii	Greening and Paving shall be implemented in the plant area to arrest soil erosion and dust pollution from exposed soil surface.	**Being Complied.** At present, Greening and Paving has been implemented in the plant area to arrest soil erosion and dust pollution from exposed soil surface. The same shall be continued in the said expansion project.
iii	41,784 m^3 /day of water requirement after the proposed expansion shall be met from Brahmani River and by Internal recycling after prior approval of the Competent Authority. No ground water abstraction is permitted.	**Being Complied.** Post expansion of JSL, 33,384 m3/day water shall be met from Brahmani River and by Internal recycling with the approval of the Competent Authority. No ground water abstraction shall be done.

Sl. No.	Condition	Compliance Status
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.	**Being Complied.** At present an independent ETP has been installed and the ETP sludge (hazardous waste) generated is being sent to SPCB approved CHWTSDF site of Re Sustainability Limited. The same practice will be adopted in the expansion project. Acid Recovery Plant is installed in existing CRM unit and the same shall be adopted in the expansion project
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.	**Being Complied.** At present Covered sheds with concrete flooring, toe walls, garland drains and settling pits have been made for storage of raw materials. The same practice will be followed in the expansion project.
vi	Top Recovery Turbine, Dry Gas Cleaning and Stove gas waste heat recovery systems shall be installed in BF.	**Noted & Agreed** Top Recovery Turbine, Dry Gas Cleaning and Stove gas waste heat recovery systems shall be installed in BF which is under construction.
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	**Noted & Agreed** Sinter cooler waste recovery system and suitable technology for control of dioxins and furans emissions from the plant shall be adopted.
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	**Being Complied.** At present, TCLP analysis of AOD slag is being carried out 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 and road

Sl. No.	Condition	Compliance Status
	after the recovery of metal.	construction at NHAI. The same practice will be adopted in the expansion project.
ix	The Oil scum and oily waste from CRM shall be sent to registered recyclers	**Being Complied.** At present, the Oil scum and oily waste generated from CRM is being sent to authorized recyclers. The same practice will be adopted in the expansion project.
x	Following additional arrangements to control fugitive dust shall be provided: a. Fog / Mist Sprinklers at all conveyors point and on bulk raw material storage area (at the transfer points) like Iron Ore, Coal and for Fly Ash and similar solid waste storage areas. b. Proper covered vehicle shall be used while transport of materials. EC Identification No. - EC22A008OR182825 File No. - IA-J-11011/281/2007-IA.II(I) Date of Issue EC - 01/06/2022 Page 6 of 13 c. Wheel washing mechanism shall be provided in entry and exit gates with complete recirculation system.	**Being Complied.** a. At present, Dry fog systems have been installed at conveyors points and gun sprinklers were also installed at raw material storage yard to control fugitive emission. The same practice shall be followed in the said expansion project. b. At present, all the raw materials are transporting through rail and covered vehicles and the same shall be followed in the said expansion project. c. Wheel washing system with complete recirculation system has been installed.
xi	All internal road and connecting road from project site to main highway shall be developed and maintained with suitable Million Axle Standard (MSA) as per the traffic load due to existing and proposed project.	**Being Complied.** At present, all the internal roads and connecting road from project site to main highway are made with RCC/PCC and the same shall be followed in the said expansion project.
xii	Performance test shall be conducted on all pollution control systems every year	**Being Complied.** Performance test will be conducted on all

Sl. No.	Condition	Compliance Status
	and report shall be submitted to Regional Office of the MoEF&CC.	pollution control systems every year and report will be submitted to Regional Office of the MoEF&CC post commissioning of expansion project. However, performance test of ESP of our existing CPP has been carried out by Vimta Lab and the reports are enclosed As **Annexure – I.**
xiii	Particulate matter emission from stacks shall be less than 30 mg/Nm3.	**Being Complied.** Suitable Pollution Control equipments will be installed to confirm the Particulate Matter emission from stacks less than 30 mg/Nm3 for all units.
xiv	85-90 % of billets shall be rolled directly in hot stage. RHF shall operate using only Light Diesel Oil as a fuel.	**Being Complied.** Slabs from SMS are being rolled directly in hot stage. RHF is operating using only Light Diesel Oil as a fuel.
xv	Submerged Arc Furnace and Electric Arc Furnace shall be of closed type with 4th hole extraction system.	**Being Complied.** Submerged Arc Furnace and Electric Arc Furnace shall be of closed type with 4^{th} hole extraction 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.	Being complied. CER compliance status is being given in Half Yearly EC Compliance report and submitted to RO, SPCB. The compliance status of CER is enclosed as **Annexure – II.**

B. General Condition

Sl. No.	Condition	Compliance Status
I. Statutory Compliance		
i	The Environment Clearance (EC) granted to the project/ activity is strictly under the provisions of the EIA Notification, 2006 and its amendments issued from time to time. It does not tantamount/ construe to approvals/ consent/ permissions etc., required to be obtained or standards/conditions to be followed under any other Acts/Rules/Subordinate legislations, etc., as may be applicable to the project.	**Noted & Agreed**
II. Air quality monitoring and preservation		
i	24x7 continuous emission monitoring system at process stacks to monitor stack emission as well as four Continuous Ambient Air Quality Station (CAAQS) for monitoring AAQ parameters with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time. The CEMS and CAAQMS shall be connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.	**Being Complied.** At present, CEMS have been installed at all major process stacks and connected to SPCB/CPCB servers and the same practice shall be followed in the said expansion project. 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.

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.	**Being Complied.** At present, fugitive emission monitoring at various locations is being carried out through NABL accredited laboratory on monthly basis. The same practice shall be followed in the said expansion project.
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.	**Being complied** At present, appropriate Air Pollution Control (APC) system 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. The same practice shall be followed in the said expansion project.
iv	The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.	**Being complied.** Leakage detection and mechanized bag cleaning facilities has been provided for better maintenance of bags in existing Air Pollution Control Systems devices and the same shall be implemented in expansion projects also.
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.	**Being Complied.** At present, the fines collected from Pollution Control Equipments are being reused in the process after briquetting. The same practice shall be followed in the said expansion project.

vi	The project proponent shall ensure covered transportation and conveying of ore, coal and other raw material to prevent spillage and dust generation.	**Being Complied.** At present, all the raw materials are transporting through rail and covered vehicles to prevent spillage/dust generation and the same shall be followed in the said expansion project.
vii	The project proponent shall provide primary and secondary fume extraction system at all melting furnaces.	**Being complied.** Primary and secondary fume extraction system will be provided at all melting furnaces.
viii	Design the ventilation system for adequate air changes as per prevailing norms for all tunnels, motor houses, Oil Cellars.	**Being complied** At present, all the ventilation system for adequate air changes has been designed as per ACGIH 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 recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.	**Being complied.** At present, Continuous Effluent Monitoring System has been installed at ETP of Cold Rolling Mill and connected to SPCB/CPCB server. The same shall be followed in the said expansion project.

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.	**Being Complied.** At present, ground water quality is being monitored in nearby area of plant site twice in a year (pre- and post-monsoon) through NABL accredited laboratory. The last ground water monitoring report is enclosed as Appendix – A. The same shall be followed in the said expansion project.
iii	Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.	**Being complied.** At present, Two nos. of Sewage Treatment Plants have been installed for treatment of domestic waste water to meet the prescribed standards.
iv	The project proponent shall provide the ETP for effluents of rolling mills to meet the standards prescribed in G.S.R 277 (E) 31st March 2012 (applicable to IF/EAF) as amended from time to time.	**Being complied.** At present, a dedicated effluent treatment plant has been installed for existing Cold Rolling Mill unit with the provision of Continuous Effluent Monitoring System. The same shall be followed in the said expansion project.
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.	**Being Complied.** At present, Garland drains and collection pits have been 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. The same shall be followed in the said expansion project.

vi	Tyre washing facilities shall be provided at the entrance/exit of the plant gates.	**Being complied.** Wheel washing system with complete 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.	**Being complied.** 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 six-monthly compliance report. The same shall be followed in the said expansion project.
V. Energy Conservation measures		
i	Conservation measures may be adopted such as adoption of solar energy and provision of LED lights etc., to minimize the energy consumption.	**Being complied.** At present, LED lights are provided where ever possible and same shall be followed in the said expansion project. Floating solar project has been installed at water reservoir of JSL for generation of 7 MW power as RE power.
ii	Used refractories shall be recycled.	**Being complied.** At present, Used refractories generated from SMS are being recycled in process and same shall be followed in the said expansion project.

<table>
<tr><td>iii</td><td>Kitchen waste shall be composted or converted to biogas for further use.</td><td>Being complied.

At present, An organic Waste Converter of capacity 100 kg/day has been installed and the compost produced is used for greenbelt development.</td></tr>
<tr><td colspan="3">VI. Green Belt</td></tr>
<tr><td>i</td><td>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.</td><td>Being complied.

GHG emission inventory for the plant has been carried out and the GHG Emission Intensity as follows.
<table><tr><td colspan="3">GHG Emission Intensity (TCO2e/T)</td></tr><tr><td rowspan="2">2021-22</td><td>Scope 1</td><td>2.3958</td></tr><tr><td>Scope 2</td><td>0.0757</td></tr></table></td></tr>
<tr><td>ii</td><td>Project proponent shall submit a study report on De-carbonization program, which would essentially consist of company's carbon emissions, carbon budgeting/ balancing, carbon sequestration activities and carbon capture, use and storage and offsetting strategies. Further, the report shall also contain time bound action plan to reduce its carbon intensity of its operations and supply chains, energy transition pathway from fossil fuels to Renewable energy etc. All these activities/ assessments should be measurable and monitor able with defined time frames.</td><td>Being complied.

JSL has taken various Decarburization programs. The detail report is enclosed as Annexure – III.</td></tr>
<tr><td colspan="3">VII. Public hearing and Human health issues</td></tr>
</table>

i	Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.	**Being complied.** Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan has implemented for existing operation and the same shall be followed for the new expansion project.
ii	The project proponent shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protection Equipment (PPE) as per the norms of Factory Act.	**Being complied.** Presently, Heat stress analysis for the workmen who work in high temperature work zone is being carried out and Personal Protection Equipment (PPE) as per the norms of Factory Act is being provided to the workman. The same shall be followed in the said expansion project.
iii	Occupational health surveillance of the workers shall be done on a regular basis and records maintained.	**Being complied.** Presently, Annual health check up of workers is being carried out and records are maintained. The same shall be followed in the said expansion project.
VIII.	**Environment Management**	
i	The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 30/09/2020. As part of Corporate Environment Responsibility (CER) activity, PP has committed to adopt 20 nearby villages for development activities. Out of 20 villages PP has already identified six villages namely Tikar, Kumbhiragadia, Manpur, Balungabandhi, Marurtikar and Khurunti villages.	**Noted.** Necessary initiative has been taken to adopt the villages as per the need base programme.

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 of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.	**Being complied.** JSL already has framed Environmental Policy as a part of the QEOHS (Quality, Environment, Occupational Health & Safety) policy framework and is committed to maintain environment friendly, safe, healthy and sustainable working condition in all its operations. The same shall be followed in the said expansion project.
Iii	A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization	**Being complied** At present, JSL already has a well-constituted Environment, Horticulture & Safety (EHS) department with qualified and experienced officers under the administrative control of Head EHS and Head EHS directly report to the Plant Head
IX. Miscellaneous		
i	The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.	**Complied** Advertisement on grant of Environment Clearance have been published in newspapers namely ORISSA POST (English) and PRAMEYA (Odia) on 07.06.2022 respectively. Environment Clearance is displayed in the website of the company permanently.

ii	The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.	**Complied.** The copies of the environmental clearance have been submitted to the Heads of local bodies, Panchayats on 09.06.2022.
iii	The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.	**Being complied** Presently, six-monthly reports on the status of the compliance of the stipulated environmental conditions uploaded on company website and same shall be continued
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.	**Being complied** Both online and manual Stack Monitoring is being carried out and the data are displayed on the display board installed at main gate for public view. The same shall be continued in the said expansion project.
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.	**Being complied** Presently, six-monthly reports on the status of the compliance of the stipulated environmental conditions is being submitted to MOEF&CC and also uploaded on MoEF&CC website.

vi	The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company	Being complied Presently, environmental statement for each financial year in Form-V is being submitted to SPCB, Odisha in due time and the last report submitted on 28.09.2022 and also display on company website. The same shall be continued in the said expansion project.
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 & agreed**
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.	**Noted & agreed**
ix	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).	**Noted & agreed**
x	Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986	**Noted & agreed**
xi	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.	**Noted & agreed**

xii	The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.	**Noted & agreed**
xiii	The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.	**Noted & agreed**
xiv	Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.	**Noted & agreed**

STATUS OF COMPLIANCE OF ENVIRONMENT CLEARANCE CONDITIONS OF EXPANSION OF STAINLESS STEEL PRODUCTION FROM 0.8 to 2.2 MTPA and COLD ROLLING MILL FROM 0.8 to 1.6 MTPA
REF: J-11011/281/2007-IA-II (I), Dated. 18th September, 2019

C. Specific conditions

Sl .no.	Condition	Compliance status
i.	The CER shall be completed within a time frame of three years.	**Being Complied.** Activities under CER are being undertaken in line with the commencement of the expansion project. Detailed report is enclosed as **Annexure – IV**.
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.	**Being Complied.** Rain water harvesting structure with provision of recirculation system to raw water reservoir has been installed for reuse of rain water. A detailed report on Rain Water Harvesting measures at plant site has already been submitted to Regional Office of MoEF&CC, Bhubaneswar.
iii	The company shall establish separate environmental management cell for JSL & JCL respectively	**Being complied** Separate environment management cell has already been established with dedicated qualified manpower for JSL.
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.	**Being complied.** We have already carried out block plantation of 23000 no. of saplings covering an area of 35 Acres at Ambasar, Sukinda and Plantation of 6000 nos. of saplings at Village Nadiabhanga, Duburi, Dist – Jajpur over an area of 8 Acres. Detailed report is enclosed as **Annexure – II.**

D. General condition

Sl .no.	Condition	Compliance status
I . Statutory compliance:		
i.	The project proponent shall obtain Consent to Establish / Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State Pollution Control Board / Committee.	**Noted.** Consent to Establish has been obtained from SPCB, Odisha vide SPCB Letter No. 3824/IND-II-CTE-6225, dated 21.03.2020.
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.	**Noted** There is no proposal for drawl / usage of ground water for this expansion project. Existing facility for drawl of surface water shall suffice for expansion project which is 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.	**Noted.** 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.	**Being complied.** At present all the existing process stacks are equipped with Continuous Emission Monitoring System (CEMS) and connected to SPCB/CPCB server. CEMS shall also be installed at process stacks of the expansion project and will be connected to SPCB/CPCB server after operation of the plant. CEMS are also being calibrated periodically according to equipment supplier specification. Further, Online calibration facilities are already in place as per CPCB guideline.

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.	**Being complied.** Fugitive emission monitoring is being carried out on monthly basis through third party having MoEF&CC accreditation / NABL accreditation certification. The same will continue for proposed expansion project.
iii.	The project proponent shall install system carryout Continuous Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM_{10} and $PM_{2.5}$ in reference to PM emission, and SO_2 and NOx in reference to SO_2 and NOx emissions) within and outside the plant area (at least four locations one within and three outside the plant area at an angle of 120^o each), covering upwind and downwind directions.	**Complied.** JSL has already installed 4 nos. of CAAQMS at necessary location of JSL premises and data is being sent to SPCB/CPCB server.
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.	**Not Applicable.** Coke Oven Plant is not under the existing facility after demerger of JSL and 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), dated: 25.05.2018.
v.	Sampling facility at process stacks and quenching towers shall be provided as per CPCB guidelines for manual monitoring of stacks.	**Not Applicable.** Coke Oven Plant is not under the existing facility after demerger of JSL and 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), dated: 25.05.2018.
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.	**Noted.** Manual monitoring of ambient air quality / stack monitoring is being carried out periodically. Manual Stack monitoring and ambient air quality monitoring data is annexed as **Appendix – A.** The monthly summary report of continuous stack emission and air quality monitoring data is annexed as **Appendix – B.**

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.	**Being complied.** In existing Plant process, appropriate Air Pollution control devices like ESPs, Bag Filters, Dry Fog Systems have been provided to arrest fugitive dust emission. In the said expansion project appropriate Air Pollution Control (APC) system has been provided for all the dust generating points to control fugitive emission.
viii.	The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.	**Noted & Agreed.** In both existing and proposed Plant process, leakage detection and mechanized bag cleaning facilities have been installed for better maintenance of bags.
ix.	Secondary emission control system shall be provided at SMS Converters.	Being complied. Three nos. of pulse jet type bag filter having capacity of 11,56,000 M^3/hr each have been installed at the EAF & AOD furnaces for taking care of secondary emission.
x.	Pollution control system on the Steel Plant shall be provided as per the CREP Guidelines of CPCB.	**Being complied.** All the pollution control equipments 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.	**Being Complied.** 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.	**Noted and agreed.** 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. The same will be followed in the expansion project

xiii.	The project proponent shall use leak proof trucks / dumpers carrying coal and other raw materials and cover them with tarpaulin.	**Noted and agreed.** Leak proof trucks / dumpers with tarpaulin cover are engage for carrying coal and other raw materials.
xiv.	Wind Shelter fence and chemical spraying shall be provided on the raw material stock piles.	**Being complied** Wind Shelter fence with provision of water spraying system has been provided at Central Raw Material Storage Yard.
xv.	Design the ventilation system for adequate air changes as per ACGIH document for all tunnels, motor houses, Oil Cellars.	**Being complied** 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.	**Being complied.** Three nos. of pulse jet type bag filter having capacity of 11,56,000 M^3/hr each have been installed at the EAF & AOD furnaces for taking care of secondary emission.
III. Water quality monitoring and preservation		

i.	The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R 277 (E) dated 31st March 2012 (applicable to IF/EAF) as amended from time to time; S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.	**Being Complied.** Continuous Effluent Quality Monitoring System (EQMS) has been installed for both existing and proposed Cold Rolling Mill (CRM) Effluent Treatment Plant (ETP). The data of the existing EQMS is being sent to SPCB/CPCB server and the same shall be followed after operation of the new unit.
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.	**Noted** At present the unit is not drawing ground water for plant usage. However, ground water quality in nearby plant area is being monitored bi-monthly by MoEF accredited / NABL accredited third party. Report is annexed as **Appendix – A.**
iii.	The project proponent shall submit monthly summary report of continuous effluent monitoring and results of manual effluent testing and manual monitoring of ground water to Regional office of MoEF&CC, Zonal office of CPCB and regional office of SPCB along with six monthly monitoring report.	**Noted.** Continuous Effluent monitoring system has been installed at ETP out let of existing Cold Rolling Mill. The monthly summary report of continuous effluent monitoring data is annexed as **Appendix – 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.	**Being complied.** ETP has been provided for both existing and proposed plant.
v.	Adhere to "Zero Liquid Discharge"	**Being complied.** Zero Liquid Discharge for effluent is being strictly followed.

vi.	Sewage Treatment Plant shall be provided for treatment of domestic waste water to meet the prescribed standards.	**Being complied.** Two nos. of Sewage Treatment Plants have been installed inside plant premises for treatment of domestic waste water including one STP at Town Ship.
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.	**Being complied.** RCC drain all along the boundary of adjacent industries has been made. An ETP of capacity 250 m^3/hr has been constructed for treatment of surface runoff.
viii.	Tyre washing facilities shall be provided at the entrance of the plant gates.	**Being complied.** 03 nos. of mechanized wheel washing systems have been provided for tyre washing.
ix.	CO_2 injection shall be provided in GCP of SMS to reduce pH in circulating water to ensure optimal recycling of treated water for converter gas cleaning.	**Noted.** Provision for CO_2 injection have been provided in GCP of SMS
x.	The project proponent shall practice rain water harvesting to maximum possible extent.	**Being Complied.** Adequate roof top rain water recharge pits at various places of plant have been constructed. An earthen pond of 10000 m^3 has also been constructed. In addition to this for surface runoff water management during monsoon 2.3 KM surface runoff water drain have been constructed along with settling pit of more than 18,000 m3 capacity. Further the water is being treated in 250m3/hr ETP.
xi	Water meters shall be provided at the inlet to all unit process in the steel plants.	**Being complied** Water meter has been provided at all water distribution points along with individual process units and shall be complied for proposed expansion project.

xii.	The project proponent shall make efforts to minimize water consumption in the steel plant complex by segregation of used water, practicing cascade use and by recycling treated water.	**Being Complied** The unit is making all necessary efforts to minimize water consumption in the steel plant complex by recycling and reuse of treated water.
IV. Noise 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.	**Noted & Agreed.** The monitoring of work zone noise level is being carried out periodically and the monitoring data is annexed as **Appendix – A.**
ii.	The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time.	**Noted & Agreed.** The monitoring of ambient noise level is being carried out periodically and the results found are well within the prescribed standard.
V. Energy Conservation Measures		
i.	Waste Heat Recovery shall be provided in all units where the flue gas or process gas exceeds 300^{o}C.	**Noted & Agreed.** 2 nos. Waste Heat Recovery Boilers 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.	**Not Applicable.** 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.	**Being complied.** Floating solar project will be installed at water reservoir of JSL for generation of 7 MW power as RE power
iv.	Provide LED lights in their office and residential areas.	**Noted** Already provided LED lights where ever possible.

V	Ensure installation of regenerative type burners on all furnaces.	**Noted** Suitable environment friendly burners have been installed at all furnaces.
VI. Waste Management		
i.	Waste recycling plant shall be installed to recover scrap, metallic and flux for recycling to SMS.	**Noted and Agreed.** Metal Recovery Plant has been setup for recovery of metal from SMS slag for existing project. The same will be followed for expansion project.
ii.	Used refractories shall be recycled a far as possible.	Used refectories generated from process are being reused in SMS.
iii.	SMS slag after metal recovery in waste recycling facility shall be conditioned and used for road making, railway track ballast and other applications. The project proponent shall install a waste recycling facility to recover scrap, metallic and flux for recycle to Sinter Plant. The project proponent shall establish linkage for 100% reuse of rejects from Waste Recycling Plant.	**Noted** Presently, the slag generated from SMS is being recycled at Metal Recovery Plant and the slag is used for low lying area filling and road making of NHAI**.** The same will be followed for expansion project.
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.	**Being Complied.** At present 100% utilization of fly ash is being carried by sending to Cement Plant, Brick / Asbestos Manufacturing Plant and to NHAI 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.	**Being complied.** 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.

<table>
<tr><td>vi.</td><td>The waste oil, grease and other hazardous wastes like acidic sludge from pickling, galvanising, chrome plating mills etc. shall be disposed as per the Hazardous & Other Waste (Management & Transboundary Movement) Rules, 2016.</td><td>Noted

CRM ETP sludge generated from existing plant is being sent to SPCB approved CHWTSDF, Re Sustainability Limited at Sukinda. The same practice will be followed for expansion project.</td></tr>
<tr><td colspan="3">VII. Green Belt</td></tr>
<tr><td>i.</td><td>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.</td><td>Being Complied.

JSL has planted 3,46,154 nos. of trees covering an area of 156.61 Ha (about 35.8 % of the total area) of green belt inside the plant premises. However 11383 nos. of tress have been planted for gap filling in FY 2022-23. Further Avenue Plantation of about 159180 nos. samplings have been made outside the plant & 95999 nos. samplings have been distributed at free of cost to the nearby villages and educational institutions.

The unit has developed Nursery with advanced facilities on area of 8.5 Acres inside the plant.</td></tr>
<tr><td>ii.</td><td>The project proponent shall prepare GHG emission inventory for the plant and shall submit the programme for reduction of the same including carbon sequestration including plantation.</td><td>Being complied.

GHG emission inventory for the plant has been carried out and the GHG Emission Intensity as follows.
<table><tr><td colspan="3">GHG Emission Intensity (TCO2e/T)</td></tr><tr><td rowspan="2">2021-22</td><td>Scope 1</td><td>2.3958</td></tr><tr><td>Scope 2</td><td>0.0757</td></tr></table></td></tr>
<tr><td colspan="3">VIII. Public hearing and Human health issues</td></tr>
<tr><td>i.</td><td>Emergency Preparedness plan based on Hazard Identification and Risk Management (HIRA) and Disaster Management Plan shall be implemented.</td><td>Being Complied

HIRA is being done based on Hazard involved in the process and activities, which is to be carried out during operation and accordingly Onsite Emergency Plan is also updated.</td></tr>
</table>

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.	**Being complied** Defined PPE matrix is well in place and Personal Protective Equipment (PPE) have been provided to the workers who are working in high temperature work zone as per the standards as stipulated in BIS(Bureau of Indian Standard)
iii.	Provision shall be made for housing construction labour 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.	**Not Applicable.** There is no provision of staying of construction labour within the plant site. The construction labours 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.	**Being Complied.** Occupation Health surveillance of the workers is being carried out on periodical basis as per the Factory Act and records are being maintained.
IX. Corporate Environment Responsibility		
i.	The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 1st May 2018, as applicable, regarding Corporate Environment Responsibility.	**Being complied.** The same is being complied as applicable.

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.	**Being Complied.** The company is having a well laid down Environmental Policy dully approved by the Director of the company. The copy of the same is attached as **Annexure – VI.**
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	**Being Complied.** A separate Environment cell has been setup with skilled personal to take care of Environment issues of plant. The Head of Environment Department directly reports to Head of the organization.
iv.	Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be dully approved by competent authorities. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry / Regional Office along with the six-monthly compliance report.	**Being complied** 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 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.	**Being complied** Self environmental audit is being conducted regularly and any point observed is being complied. Third Party Environment Audit for the FY 2021-22 has been carried out.
vi.	All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the plants shall be implemented.	**Being complied.** All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) is strictly followed.
X. Miscellaneous		
i.	The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising in at least in two local news papers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.	**Complied** 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.	**Complied** 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.	**Being Complied.** 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 website of the company.	**Complied.** 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. The monitoring data are also being displayed in electronic display board placed at Gate No. 1 of JSL for public view.
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.	**Being Complied.** Half Yearly EC compliance report has 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.	**Being Complied.** Environment Statement Report in Form – V is being submitted to SPCB, Odisha every year by 30th September. The Last report has been submitted on 28.09.2022.

vii.	The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project. i. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government. ii. The project proponent shall abide by all commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.	**Noted**
viii.	No further expansion or modifications in the plant shall be carried out prior approval of the Ministry of Environment, Forest and Climate Change (MoEF&CC).	**Agreed**
ix.	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.	**Agreed**
x.	The Ministry may revoke or suspended the clearance, if implementation of any of the above conditions is not satisfactory.	**Agreed**
xi.	The Ministry reserves the right to stipulate additional conditions if found necessary. The company in a time bound manner shall implement these conditions.	**Agreed**

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.	**Agreed**
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.	**Agreed**
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	**Agreed**

STATUS OF COMPLIANCE OF ENVIRONMENT CLEARANCE CONDITIONS OF 1.6 MTPA INTEGRATED STAINLESS STEEL PLANT REF: J-11011/281/2007-IA-II (I), Dated. 17th May, 2018

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

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 and agreed.**
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 and agreed.**
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.**
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 and agreed.**
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.	**Complied.**

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.	**Being Complied.**
12.	No court case or violation under EIA Notification, 2006 to the project or related activity reported by project proponent.	**Noted & Agreed.**
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 24th March 2018 for transfer of Environmental Clearance, 'No Objection Certificate' from transferor, M/s JSL and Undertaking from transferee, M/s JCL on non- judicial stamp papers, Punjab and Haryana High Court Order dated 20t October, 2015 and certificate of incorporation of M/s JCL as well as the same documents with respect to transfer of 1.6 MTPA of Hot strip mill to M/s Jindal United Steel Limited.	**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 and agreed.**
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 and agreed.**
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 and agreed.**
23.	The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and rules.	**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. 1st November, 2007

A. SPECIFIC CONDITIONS:

Sl. No.	Condition	Compliance
i.	The industry shall follow Coke Oven standards as per E (P) A Notification. VOCs from the Coke Oven shall be monitored and controlled as per CPCB guidelines.	**Not Applicable.** 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^3. 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.	**Complied**. Sinter Plant & Blast Furnace Plants are yet to be installed. Bag houses are in place at Ferro Alloys Plant, SMS and CRM, with adequate Dust Extraction System (DES). Dust Extraction (DE) System has been installed at Raw Material Handling Areas & Material Transfer points to control fugitive emissions. Photographs of Air Pollution Control System of various Plants inside the Plant are enclosed as ***Annexure-V***. Online Continuous Monitoring Systems are installed at various places to monitor the emissions and data transmission is being carried out continuously through the RTDAS system of SPCB & CPCB Servers. House-keeping on roads is being maintained by using Mechanical Sweepers.

Sl. No.	Condition	Compliance
		Further, 4 nos. of truck mounted tankers of 12 KL capacity are deployed for controlling fugitive emissions on the road. Fixed type water sprinklers and Mobile Water sprinklers have been provided in plant areas to control fugitive emissions round the clock. Photographs are enclosed as ***Annexure-VIII.***
iii.	Total water requirement from Brahamani river shall not exceed 72, 696 m^3 / day or 43.66 cusec as per permission accorded by the Department of Water Resources, Govt. of Orissa. No ground water shall be used for the plant. All the treated 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 should be treated. Cyanide shall meet the standard of 0.2 ppm. TDS in the effluent discharged shall not be more than 2100 mg/l. The domestic waste water after treatment in STP shall be used for green belt development.	**Being Complied**. No ground water is being used in the plant. Zero discharge 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^3/hr has been installed and commissioned to take care of the cooling tower blow - down water for process use. Photograph enclosed as ***Annexure-IX.*** 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). Photos of Water Treatment Facilities are enclosed as ***Annexure –X.***
iv.	Coke oven by-product effluent shall be treated as per notified standards and only treated effluents after meeting the norms	**Not Applicable.** Separate EC has been obtained in the name

Sl. No.	Condition	Compliance
	shall be used for coke quenching. No fresh water shall be used for this purpose.	of M/s. Jindal Coke Limited, vide letter No. IA–J–11011/111/2018–IA–II(I) on Dated: 25.05.2018.
v.	Ground water monitoring around the solid waste disposal site/ secured landfill (SLF) shall be carried out regularly and report submitted to the Ministry's regional office at BBSR, CPCB and OPCB.	**Being Complied**. Ground water monitoring is being carried out around the plant areas and the analysis reports are being submitted to the Ministry's regional office at BBSR, CPCB and SPCB regularly.
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.	**Being Complied**. Slag is used extensively for road construction and filling in low lying areas inside the plant. Fe-Cr slag is further processed in Jigging Plant and stored in a designated area inside the plant for onward utilization. Flue gas residue from GCP and Mill Scale from CRM is being recycled in Ferro Alloys in the form of Briquettes. 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), Ramky, at Jajpur as per guideline of SPCB, Odisha.

Sl. 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.	**Complied**. JSL has planted 3,46,154 nos. of trees covering an area of 156.61 Ha (about 35.8 % of the total area) of green belt inside the plant premises. However 11383 nos. of tress have been planted for gap filling in FY 2022-23. Further Avenue Plantation of about 159180 nos. samplings have been made outside the plant & 95999 nos. samplings have been distributed at free of cost to the nearby villages and educational institutions. The unit has developed Nursery with advanced facilities on area of 8.5 Acres inside the plant.
viii.	As proposed, modified wet quenching for 1st and 2nd coke oven batteries as per CPCB guidelines and dry quenching in 3rd and 4th batteries shall be adopted during the expansion.	**Not Applicable.** 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:

Sl. No.	Condition	Compliance
i.	The project authorities must strictly adhere to the stipulations made by the Orissa Pollution Control Board and the State Government.	**Being Complied**. 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.**

iii.	The gaseous emissions from various process units shall conform to the load/ mass based standards notified by this Ministry on 19th May, 1993 and standards prescribed from time to time. The state board may specify more stringent standards for the relevant parameters keeping in view the nature of the industry and its size and location. At no time, the emission level shall go beyond the prescribed standards. 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.	**Being Complied**. The gaseous emissions from various process units are being monitored by in-house Environmental Laboratory. The analysis reports are being submitted to SPCB and MOEF regularly. The gaseous emissions are conforming to the standards. Steps are taken to ensure that the Particulate Matter emissions remain below the prescribed norms. Stack Analysis report is given as ***Appendix –A.*** 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. Low NOx burners have also been installed to control NOx levels.

Sl. No.	Condition	Compliance
iv.	At least 4 ambient air quality monitoring stations shall be established in the downward direction as well as where maximum ground level concentration of SPM, SO_2 and NOx is anticipated in consultation with the OPCB. Data on ambient air quality and stack emission shall be regularly submitted to this Ministry including its Regional Office at BBSR/ OPCB/ CPCB once in six month.	**Complied**. 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_{10}, $PM_{2.5}$ and other gaseous parameters. Monitoring data is being submitted to both SPCB and MOEF regularly. The manual monitoring data of both Stack & ambient air quality is annexed as ***Appendix-A***.
v.	In plant control measures for checking fugitive emissions from all the vulnerable sources like coke oven area, sinter plant, blast furnace area etc. Further specific measures like water sprinkling shall be carried out at the 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.	**Being Complied.** Fugitive emission is being controlled by Dust suppression systems like DFS system and fixed type water sprinkler system at raw material handling areas, material transfer points of Ferro-alloys plants and CRMHS area to control fugitive emissions. Bag filters & centralized de-dusting system has been also 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. Photographs are enclosed as ***Annexure-VI.***

Sl. No.	Condition	Compliance
vi.	Industrial waste water shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May, 1993 and 31st December, 1993 or as amended from time to time. The waste water shall be utilized for plantation purpose.	**Being Complied**. The plant is being maintained a zero discharge scenario. 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.	**Being Complied**. Adequate measures have been taken to keep noise level within 85 dB(A) in and around plant area. Silencers, Acoustic Enclosures are provided to control noises, in various areas of the Plant. The Ambient Noise levels are conforming to the standards prescribed under EPA Rules, 1989. Noise monitoring result are enclosed as ***Appendix-A.***

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.	**Complied**. Rain water harvesting pit has been constructed to harvest the rain water / surface runoff water from plant catchment area. Surface runoff study has also been conducted for the entire plant and the report has been submitted to SPCB.
ix.	Occupational health surveillance of the workers shall be done on a regular basis and record maintained as per the Factories Act.	**Being Complied**. Occupational health surveillance of the workers is being carried out on a regular basis and records are being maintained as per the Factories Act.
x.	Recommendations made in the CREP guidelines issued for the steel plants shall be implemented.	**Being Complied**. 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.	**Being Complied**. 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 ***Annexure-XI.***

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.	**Already Complied**. We have already incurred more than Rs. 115 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.	**Being Complied**. Six monthly compliance report and monitored data is being submitted to the Ministry regularly. The last half yearly compliance report for the Period from Apr'22 to Sep'22 has submitted to MOEFCC on 30.11.2022.
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.	**Already complied**.

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.	**Already complied**.
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.	**Being Complied**.

STATUS OF COMPLIANCE OF ENVIRONMENT CLEARANCE CONDITIONS OF 4 x 125 CAPTIVE POWER PLANT (CPP) Ref: J-13011/5/2006-IA.II (T), dated 30th November, 2006

Sl. No.	Condition	Compliance
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.	**Complied**. In the first phase, 2X125 MW coal based Power Plant have been installed and commissioned. Another 2X125 MW Power Plant shall be installed in the second phase of the project. 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%.

Sl. 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	**Complied**. 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 and agreed.**
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.

Sl. No.	Condition	Compliance
vi.	The ash pond was lined with clay on the other side embankment and with LDPE sheet on the bottom.	**Complied**. The ash pond made inside the plant is lined with HDPE 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.	**Being Complied**. 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.	**Complied**. Bi-flue stacks having height of 150 m above the ground level has been installed. The exit velocity of gasses at the stack outlet is 15.99 m/sec. On line monitoring instrument for Particulate Matter (PM), SO_2, NO_x and Hg emissions have been installed with transmission of data to both SPCB & CPCB server.
ix.	Low NO_x burner shall be provided.	**Complied**. The unit has installed the low NO_x burners for coal and oil.

Sl. No.	Condition	Compliance
x.	High efficiency ESP with efficiency not less than 99.9% shall be installed to ensure that SPM emission does not exceed 100 mg/Nm3.	**Complied**. Each Boiler has been provided with an ESP having two passes with 7 fields each. The ESP is designed to perform at an efficiency of 99.9% to control the particulate matter emission below 50 mg/Nm^3. The stack monitoring data from Oct'22 to Mar'23 is attached as ***Appendix - A.***
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.	**Complied**. 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^{th} year full fly ash utilization shall be used.	**Being Complied**. 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.	**Being Complied**. Cooling tower circuit is of closed cycle where COC of more than 8 is being maintained. A reverse osmosis (RO) plant of $50m^3$/hr has been installed and commissioned to take care of the cooling tower blow - down water for process use. Photograph enclosed as ***Annexure-IX*****.**

Sl. No.	Condition	Compliance
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.	**Being Complied**. The water consumption of CPP is about 610 m^3/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. RO plant of 50 m^3/hr has been installed and commissioned to take care of the cooling tower blow - down water for process use. Photograph enclosed as ***Annexure-IX.***
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.	**Being Complied**. 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.	**Being Complied**. 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.	**Being Complied**. 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 ***Appendix – A.***

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.	**Being Complied**. Air quality monitoring is being done on regular basis. The six monthly monitoring data during the Period from October'22 to March'23 is attached as ***Appendix - A***.
xix.	For controlling fugitive dust, regular sprinkling of water in vulnerable areas of the plant shall be ensured.	**Being Complied**. 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.	**Complied**. JSL has planted 3,46,154 nos. of trees covering an area of 156.61 Ha (about 35.8 % of the total area) of green belt inside the plant premises. However 11383 nos. of tress have been planted for gap filling in FY 2022-23. Further Avenue Plantation of about 159180 nos. samplings have been made outside the plant & 95999 nos. samplings have been distributed at free of cost to the nearby villages and educational institutions. The unit has developed Nursery with advanced facilities on area of 8.5 Acres inside the plant.
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.	**Already Complied**.
xxii.	A separate environmental monitoring cell with suitable qualified staff shall be set up for the implementation of the stipulated environmental safeguards.	**Complied**. 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.	**Being Complied**. 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. The last half yearly report for the period from Apr'22 to Sep'22 has been submitted to MOEFCC on 30.11.2022.
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.	**Already complied**.
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.	**Being Complied**.
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 and agreed.**

xxvii.	The Ministry reserves the right to revoke the clearance if conditions are not implemented to the satisfaction of the Ministry.	**Noted and agreed.**
xxviii.	The environmental Clearance shall be valid for 5 years from the start of generation of power from CPP.	**Noted and agreed.**
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 and agreed.**
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.	**Noted and agreed.**

LIST OF ENCLOSURES

Sl. No.	Description	Annexure /Appendix
1.	Performance test of ESP	Annexure - I
2.	CER compliance report – EC 2022	Annexure - II
3.	Report on Decarbonisation programme	Annexure – III
4.	CER compliance report – EC 2019	Annexure – IV
5.	Greenbelt Development	Annexure – V
6.	Environment Policy	Annexure - VI
7.	Air Pollution Control System	Annexure - VII
8.	Water Tanker and Road Swiping Machine	Annexure - VIII
9.	Reverse Osmosis Plant	Annexure - IX
10.	Water Treatment Facility	Annexure - X
11.	CSR Report (Oct' 2022 to Mar ' 23)	Annexure - XI
12.	Monitoring Report (Oct' 2022 to Mar ' 23)	Appendix –A
13.	Online Monitoring Report (Oct' 2022 to Mar ' 23)	Appendix –B

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Vimta
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ISSUED TO

M/s JINDAL STAINLESS LIMITED
UNIT: CAPTIVE POWER PLANT
Kalinga Nagar Industrial complex
Jajpur-755026, Odisha

Report Number	:	**VLL/VLS/22/11919/001**
Issue Date	:	21.11.2022
P.O. Ref	:	6200010313
P.O. Date	:	12.10.2022

Sample Name : **Particle size Distribution Location:U#2,ESP Inlet Pass A**

Sample Collection Date	:	2022-11-03	Sample Registration Date	:	2022-11-07
Analysis Starting Date	:	2022-11-07	Analysis Completion Date	:	2022-11-17
Method of testing	:	As per SOP NO:02/131 and instrumrnt used Malvern Mastersizer 3000.			
Received Quantity	:	1 Pack			

Samples Collected by Vimta Labs Limited.

TEST REPORT

Sr.No.	Test Parameters	UoM	RESULTS
1	Less than 5 Micron	%	8.42
2	5 – 10 Micron	%	7.78
3	10-20 Micron	%	18.84
4	20-40 Micron	%	20.17
5	40-60 Micron	%	12.14
6	60-90 Micron	%	11.05
7	90-120 Micron	%	9.06
8	120-150 Micron	%	2.49
9	150-200 Micron	%	5.68
10	200-250 Micron	%	1.26
11	250-300 Micron	%	1.62
12	300-400 Micron	%	0.75
13	Above 500 Micron	%	0.74

Results relate only to the sample tested.

Remarks:

- END OF THE REPORT –

Name and Designation of Authorized Signatory

Dr.Subbareddy Mallampati
Dy.Manager- Environment

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ISSUED TO

M/s JINDAL STAINLESS LIMITED
UNIT: CAPTIVE POWER PLANT
Kalinga Nagar Industrial complex
Jajpur-755026, Odisha

Report Number	:	**VLL/VLS/22/11919/002**
Issue Date	:	21.11.2022
P.O. Ref	:	6200010313
P.O. Date	:	12.10.2022

Sample Name : **Particle size Distribution Location:U#2,ESP Inlet Pass B**

Sample Collection Date	:	2022-11-03	Sample Registration Date	:	2022-11-07
Analysis Starting Date	:	2022-11-07	Analysis Completion Date	:	2022-11-17
Method of testing	:	As per SOP NO:02/131 and instrumrnt used Malvern Mastersizer 3000.			
Received Quantity	:	1 Pack			

Samples Collected by Vimta Labs Limited.

TEST REPORT

Sr.No.	Test Parameters	UoM	RESULTS
1	Less than 5 Micron	%	9.57
2	5 – 10 Micron	%	7.70
3	10-20 Micron	%	14.98
4	20-40 Micron	%	15.74
5	40-60 Micron	%	9.58
6	60-90 Micron	%	8.12
7	90-120 Micron	%	6.14
8	120-150 Micron	%	1.55
9	150-200 Micron	%	2.97
10	200-250 Micron	%	0.51
11	250-300 Micron	%	0.59
12	300-400 Micron	%	0.35
13	Above 500 Micron	%	22.20

Results relate only to the sample tested.

Remarks:

- END OF THE REPORT –

Name and Designation of Authorized Signatory

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ISSUED TO

M/s JINDAL STAINLESS LIMITED
UNIT: CAPTIVE POWER PLANT
Kalinga Nagar Industrial complex
Jajpur-755026, Odisha

Report Number	:	**VLL/VLS/22/11919/003**
Issue Date	:	21.11.2022
P.O. Ref	:	6200010313
P.O. Date	:	12.10.2022

Sample Name : **Particle size Distribution Location:U#1,ESP Inlet Pass A**

Sample Collection Date	:	2022-11-03	Sample Registration Date	:	2022-11-07
Analysis Starting Date	:	2022-11-07	Analysis Completion Date	:	2022-11-17
Method of testing	:	As per SOP NO:02/131 and instrumrnt used Malvern Mastersizer 3000.			
Received Quantity	:	1 Pack			

Samples Collected by Vimta Labs Limited.

TEST REPORT

Sr.No.	Test Parameters	UoM	RESULTS
1	Less than 5 Micron	%	11.86
2	5 – 10 Micron	%	10.08
3	10-20 Micron	%	21.21
4	20-40 Micron	%	20.91
5	40-60 Micron	%	12.17
6	60-90 Micron	%	13.24
7	90-120 Micron	%	4.58
8	120-150 Micron	%	1.75
9	150-200 Micron	%	3.25
10	200-250 Micron	%	0.51
11	250-300 Micron	%	0.44
12	300-400 Micron	%	Nil
13	Above 500 Micron	%	Nil

Results relate only to the sample tested.

Remarks:

- END OF THE REPORT –

Name and Designation of Authorized Signatory

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Dy.Manager- Environment

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Vimta
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ISSUED TO

M/s JINDAL STAINLESS LIMITED
UNIT: CAPTIVE POWER PLANT
Kalinga Nagar Industrial complex
Jajpur-755026, Odisha

Report Number	:	**VLL/VLS/22/11919/004**
Issue Date	:	21.11.2022
P.O. Ref	:	6200010313
P.O. Date	:	12.10.2022

Sample Name : **Particle size Distribution Location:U#1,ESP Inlet Pass B**

Sample Collection Date	:	2022-11-03	Sample Registration Date	:	2022-11-07
Analysis Starting Date	:	2022-11-07	Analysis Completion Date	:	2022-11-17
Method of testing	:	As per SOP NO:02/131 and instrumrnt used Malvern Mastersizer 3000.			
Received Quantity	:	1 Pack			

Samples Collected by Vimta Labs Limited.

TEST REPORT

Sr.No.	Test Parameters	UoM	RESULTS
1	Less than 5 Micron	%	11.18
2	5 – 10 Micron	%	8.39
3	10-20 Micron	%	13.86
4	20-40 Micron	%	13.64
5	40-60 Micron	%	8.88
6	60-90 Micron	%	8.29
7	90-120 Micron	%	6.23
8	120-150 Micron	%	1.47
9	150-200 Micron	%	2.76
10	200-250 Micron	%	0.47
11	250-300 Micron	%	0.57
12	300-400 Micron	%	0.45
13	Above 500 Micron	%	23.81

Results relate only to the sample tested.

Remarks:

- END OF THE REPORT –

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Report Number	:	**VLL/VLS/22/11919/005**
Issue Date	:	21.11.2022
P.O. Ref	:	6200010313
P.O. Date	:	12.10.2022

Sample Name : Chemical Analysis (Boiler Unit#1 Fly Ash)

Sample Collection Date	:	2022-11-04	Sample Registration Date	:	2022-11-07
Analysis Starting Date	:	2022-11-07	Analysis Completion Date	:	2022-11-17
Method of testing	:	As per ASTM D6349,ASTM D6357,ASTM D7348.			
Received Quantity	:	1 Pack			
Test Required	:	Chemical Analysis (Al_2O_3,Fe_2O_3,SiO_2,Na_2O,K2O,CaO,MgO,SO_3,P_2O_5,LOI,TiO_2,MnO and LiO_2.			

Samples Collected by Vimta Labs Limited.

TEST REPORT

Sr.No.	Test Parameters	UoM	RESULTS
1	Loss on Ignition	%	1.06
2	Silica as SiO_2	%	60.91
3	Alumina as Al_2O_3	%	27.18
4	Iron as Fe_2O_3	%	3.40
5	Calcium as CaO	%	0.79
6	Magnesium as MgO	%	0.55
7	Sodium as Na_2O	%	0.78
8	Potassium as K_2O	%	1.24
9	Manganese as MnO	%	0.03
10	Titanium as TiO_2	%	1.49
11	Phosphorous as P_2O_5	%	0.29
12	Sulphur as SO_3	%	1.86
13	Lithium as Li_2O	%	0.07

Results relate only to the sample tested.
Remarks: Sample tested as received bases.

- END OF THE REPORT –

Name and Designation of Authorized Signatory

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Report Number	:	**VLL/VLS/22/11919/006**
Issue Date	:	21.11.2022
P.O. Ref	:	6200010313
P.O. Date	:	12.10.2022

Sample Name : Chemical Analysis (Boiler Unit#2 Fly Ash)

Sample Collection Date	:	2022-11-03	Sample Registration Date	:	2022-11-07
Analysis Starting Date	:	2022-11-07	Analysis Completion Date	:	2022-11-17
Method of testing	:	As per ASTM D6349,ASTM D6357,ASTM D7348.			
Received Quantity	:	1 Pack			
Test Required	:	Chemical Analysis (Al_2O_3,Fe_2O_3,SiO_2,Na_2O,K2O,CaO,MgO,SO_3,P_2O_5,LOI,TiO_2,MnO and LiO_2.			

Samples Collected by Vimta Labs Limited.

TEST REPORT

Sr.No.	Test Parameters	UoM	RESULTS
1	Loss on Ignition	%	1.03
2	Silica as SiO_2	%	61.19
3	Alumina as Al_2O_3	%	27.25
4	Iron as Fe_2O_3	%	2.98
5	Calcium as CaO	%	0.73
6	Magnesium as MgO	%	0.51
7	Sodium as Na_2O	%	0.44
8	Potassium as K_2O	%	1.07
9	Manganese as MnO	%	0.03
10	Titanium as TiO_2	%	1.40
11	Phosphorous as P_2O_5	%	0.30
12	Sulphur as SO_3	%	2.59
13	Lithium as Li_2O	%	0.11

Results relate only to the sample tested.
Remarks: Sample tested as received bases.

- END OF THE REPORT –

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Jajpur-755026, Odisha

Report Number : **VLL/VLS/22/11919/007**
Issue Date : 07.11.2022
PO Reference : 6200010313
PO Date : 12.10.2022

Sampling Date	:	04.11.2022	Samples Registered on	:	07.11.2022
Analysis started on	:	07.11.2022	Analysis Completed on	:	07.11.2022
Samples Collected by Vimta Labs Limited.					

Plant Name & Address	:	Jindal Stainless Limited Kalinga Nagar Industrial complex Jajpur-755026, Odisha
Sampling Location	:	Boiler unit#1, Pass A ESP Inlet & Outlet
Duct Diameter at Test Location	:	ESP Inlet & Outlet: 3.0 X 2.4 M
Test Protocol	:	IS:11255 Part-1:2003, IS:11255 Part-3:2008, USEPA Method No. 3A
Fuel Used	:	Indian Coal
Running Load	:	116 MW(Avg.)

TEST REPORT

Sl. No.	Test Location	Date & Time	Temp. (°C)	Static Pressure (mmWC)	O2 (%V/V)	CO2 (%V/V)	CO (mg/ Nm3)	Moisture (%V/V)	Velocity (m/sec)	Flow rate (Am3/sec)	Flow rate (Nm3/sec)	Dust Conc.
1	Pass A ESP Inlet (1st Sample)	04.11.2022 11:10 Hrs.	131	-245	7.12	12.55	5	9.83	23.46	168.94	108.82	52.66 (gm/Nm³)
2	Pass A ESP Outlet (1st Sample)	04.11.2022 11:10 Hrs.	126	-286	7.72	11.8	2	9.14	24.68	177.72	116.31	21.98 (mg/Nm³)
3	Pass A ESP Inlet (2nd Sample)	04.11.2022 12:05 Hrs.	130.3	-245	7.58	12.33	5	9.44	23.27	167.52	108.55	56.58 (gm/Nm³)
4	Pass A ESP Outlet (2nd Sample)	04.11.2022 12:05 Hrs.	126	-279	8.3	11.48	2	8.77	24.51	176.46	116.04	23.79 (mg/Nm³)
5	Pass A ESP Inlet (3rd Sample)	04.11.2022 13:00 Hrs.	130.3	-245	7.05	12.51	6	9.39	23.55	169.58	109.95	50.86 (gm/Nm³)
6	Pass A ESP Outlet (3rd Sample)	04.11.2022 13:00 Hrs.	127	-275	7.62	11.91	3	8.71	24.74	178.1	116.95	24.13 (mg/Nm³)

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Report Number : **VLL/VLS/22/11919/007**
Issue Date : 07.11.2022
PO Reference : 6200010313
PO Date : 12.10.2022

Sampling Date	:	04.11.2022	Samples Registered on	:	07.11.2022
Analysis started on	:	07.11.2022	Analysis Completed on	:	07.11.2022
Samples Collected by Vimta Labs Limited.					

Plant Name & Address	:	Jindal Stainless Limited Kalinga Nagar Industrial complex Jajpur-755026, Odisha
Sampling Location	:	Boiler unit#1, Pass B ESP Inlet & Outlet
Duct Diameter at Test Location	:	ESP Inlet & Outlet: 3.0 X 2.4 M
Test Protocol	:	IS:11255 Part-1:2003, IS:11255 Part-3:2008, USEPA Method No. 3A
Fuel Used	:	Indian Coal
Running Load	:	100 MW(Avg.)

TEST REPORT

Sl. No.	Test Location	Date & Time	Temp. (°C)	Static Pressure (mmWC)	O2 (%V/V)	CO2 (%V/V)	CO (mg/ Nm3)	Moisture (%V/V)	Velocity (m/sec)	Flow rate (Am3/sec)	Flow rate (Nm3/sec)	Dust Conc.
1	Pass B ESP Inlet (1st Sample)	04.11.2022 15:10 Hrs.	116	-190	8.32	11.28	5	9.37	18.84	135.61	91.68	60.00 (gm/Nm³)
2	Pass B ESP Outlet (1st Sample)	04.11.2022 15:10 Hrs.	109	-196	8.4	11.0	3	8.4	19.98	143.85	100.03	24.34 (mg/Nm³)
3	Pass B ESP Inlet (2nd Sample)	04.11.2022 16:15 Hrs.	120	-230	8.2	11.35	6	8.79	19.78	142.44	95.54	65.34 (gm/Nm³)
4	Pass B ESP Outlet (2nd Sample)	04.11.2022 16:15 Hrs.	112	-260	8.3	11.28	3	7.94	20.8	149.76	103.19	25.17 (mg/Nm³)
5	Pass B ESP Inlet (3rd Sample)	04.11.2022 17:10 Hrs.	119	-235	7.61	12.1	6	9.24	19.38	139.53	93.32	65.73 (gm/Nm³)
6	Pass B ESP Outlet (3rd Sample)	04.11.2022 17:10 Hrs.	111	-258	8.42	11.2	3	8.56	20.16	145.17	99.63	22.29 (mg/Nm³)

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Jajpur-755026, Odisha

Report Number : **VLL/VLS/22/11919/008**
Issue Date : 07.11.2022
PO Reference : 6200010313
PO Date : 12.10.2022

Sampling Date	:	03.11.2022	Samples Registered on	:	07.11.2022
Analysis started on	:	07.11.2022	Analysis Completed on	:	07.11.2022
Samples Collected by Vimta Labs Limited.					

Plant Name & Address	:	Jindal Stainless Limited Kalinga Nagar Industrial complex Jajpur-755026, Odisha
Sampling Location	:	Boiler unit#2, Pass A ESP Inlet & Outlet
Duct Diameter at Test Location	:	ESP Inlet & Outlet: 3.0 X 2.4 M
Test Protocol	:	IS:11255 Part-1:2003, IS:11255 Part-3:2008, USEPA Method No. 3A
Fuel Used	:	Indian Coal
Running Load	:	118 MW(Avg.)

TEST REPORT

Sl. No.	Test Location	Date & Time	Temp. (°C)	Static Pressure (mmWC)	O2 (%V/V)	CO2 (%V/V)	CO (mg/ Nm3)	Moisture (%V/V)	Velocity (m/sec)	Flow rate (Am3/sec)	Flow rate (Nm3/sec)	Dust Conc.
1	Pass A ESP Inlet (1st Sample)	03.11.2022 12:30 Hrs.	123.3	-195	7.03	12.56	6	9.78	19.12	137.63	90.87	54.91 (gm/Nm³)
2	Pass A ESP Outlet (1st Sample)	03.11.2022 12:30 Hrs.	119	-215	7.4	12.2	4	8.77	20.36	146.61	98.67	21.31 (mg/Nm³)
3	Pass A ESP Inlet (2nd Sample)	03.11.2022 13:30 Hrs.	122.7	-192	7.31	12.43	6	9.86	19.02	136.94	90.51	46.64 (gm/Nm³)
4	Pass A ESP Outlet (2nd Sample)	03.11.2022 13:30 Hrs.	119	-220	7.9	11.9	4	8.83	20.16	145.17	97.68	20.63 (mg/Nm³)
5	Pass A ESP Inlet (3rd Sample)	03.11.2022 14:30 Hrs.	123.7	-197	7.55	12.34	5	9.73	18.91	136.19	89.87	49.75 (gm/Nm³)
6	Pass A ESP Outlet (3rd Sample)	03.11.2022 14:30 Hrs.	118	-216	8.01	11.96	3	8.94	20.12	144.83	97.62	23.22 (mg/Nm³)

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Issue Date : 07.11.2022
PO Reference : 6200010313
PO Date : 12.10.2022

Sampling Date	:	03.11.2022	Samples Registered on	:	07.11.2022
Analysis started on	:	07.11.2022	Analysis Completed on	:	07.11.2022
Samples Collected by Vimta Labs Limited.					

Plant Name & Address	:	Jindal Stainless Limited Kalinga Nagar Industrial complex Jajpur-755026, Odisha
Sampling Location	:	Boiler unit#2, Pass B ESP Inlet & Outlet
Duct Diameter at Test Location	:	ESP Inlet & Outlet: 3.0 X 2.4 M
Test Protocol	:	IS:11255 Part-1:2003, IS:11255 Part-3:2008, USEPA Method No. 3A
Fuel Used	:	Indian Coal
Running Load	:	116 MW(Avg.)

TEST REPORT

Sl. No.	Test Location	Date & Time	Temp. (°C)	Static Pressure (mmWC)	O2 (%V/V)	CO2 (%V/V)	CO (mg/ Nm3)	Moisture (%V/V)	Velocity (m/sec)	Flow rate (Am3/sec)	Flow rate (Nm3/sec)	Dust Conc.
1	Pass B ESP Inlet (1st Sample)	03.11.2022 15:30 Hrs.	121.5	-201	7.26	12.21	5	9.86	19.18	138.1	91.47	61.68 (gm/Nm³)
2	Pass B ESP Outlet (1st Sample)	03.11.2022 15:30 Hrs.	115	-232	8.0	11.71	2	8.8	20.45	147.23	100.08	26.58 (mg/Nm³)
3	Pass B ESP Inlet (2nd Sample)	03.11.2022 16:20 Hrs.	118.5	-200	7.32	12.35	6	9.62	19.38	139.56	93.4	57.43 (gm/Nm³)
4	Pass B ESP Outlet (2nd Sample)	03.11.2022 16:20 Hrs.	112	-234	8.09	11.58	2	8.91	20.26	145.87	99.71	23.32 (mg/Nm³)
5	Pass B ESP Inlet (3rd Sample)	03.11.2022 17:10 Hrs.	118	-212	7.75	12.01	6	9.69	19.25	138.61	92.69	59.88 (gm/Nm³)
6	Pass B ESP Outlet (3rd Sample)	03.11.2022 17:10 Hrs.	110	-242	8.3	11.32	3	8.95	20.53	147.82	101.35	25.51 (mg/Nm³)

Name and Designation of Authorized Signatory

Dr. SubbaReddy Mallampati
Dy. Manager- Environment.

CER Compliance Report – EC granted on 01.06.2022

Major Issue Raised	Action Plan	Physical Target	Time Line for Execution			Total Budget in Lakh	
			Year 1st	Year 2nd	Year 3rd		
Area Development							
Development of Park	Set up of Indoor Sports Complex at Jajpur		Land selection and acquisition **Under process**	Construction of Buildings and utilities	Supply of sports equipment, furniture and fixtures.	2000	
Development of public community hall	New establishment of community hall at 6nos. Of villages.		Set up in villages namely: **Dhuligarh**, **Tikar**, **Trijanga**:by providing new building with electrification.	Set up in villages namely: **Damodarpur** by providing new building with electrification.	Set up in villages namely: Mangalpur, Singagadia: by providing new building with electrification.	100	65
Plantation activities in peripheral villages	Plantation drive at five numbers of village.		Village: Pankapal &Dhabalgiri Actual area and number of trees to be decided based survey and discussion with local authorities. Report will be sent to MoEF & CC as a part of Half Yearly EC Compliance. **Completed at Nuagaon and kharadi instead of pankapal and dhabalagiri**	Village: Jakhapura & Jajpur Road Actual area and number of trees to be decided based survey and discussion with local authorities. Report will be sent to MoEF &CC as a part of Half Yearly EC Compliance.	Village: Kharadi Actual area and number of trees to be decided based survey and discussion with local authorities. Report will be sent to MoEF & CC as a part of Half Yearly EC Compliance.	40	16
Medical Facilities							
Provision of health care facilities	Establishment of 100 bedded super specialties hospital at village Jakhapura		Land acquisition process to be completed. **Under Process**	Construction of Buildings and utilities.	Provision of medicalequipment, furniture and fixtures and essential medicines.	2000	
Medical assistance to cancer patients	Identification with assistance to cancer patients at village Kumbhiragadia		Assistance will be provided on case to case and need basis.	--	--	50	
Local Employment							
Provide employment with preference to local people	Priority to be given for local employment during both construction and operation phase.		During Construction phase it is envisaged for Direct employment of 380 nos. and Indirect employment of 1800 nos & during operation phase 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 of educational facilities	Renovation/Construction of additional new 2nos. of classrooms and electrification with sanitation facility at four nos. school.		At village: Asanabahali, Mantira **Under progress**	At village: Kumbhiragadia	At village20: Tikara	60	20
Major Issue Raised	**Action Plan**	**Physical Target**	**Time Line for Execution**			**Total Budget in Lakh**	
			Year 1st	**Year 2nd**	**Year 3rd**		
Establishment of technical education /coaching centres	Establishment of skill development centre and financial assistance to coaching centre at 2nos. Of villages.		At village: Trijanga. Establishment of skill development centre like tailoring, mobile repairing. Financial assistance for four nos. of teachers to provided.	At village: Asanbahali Establishment of skill development centre like computer education, beauty parlour, electrical machineries.	----	20	20
Drinking Water facility							
Provide drinking water to peripheral villages	Arrangement to be made in three numbers of villages.		At village Manpur: Set up of Pump house at the existing source and new pipeline laying of 1KM along with stand post. **Completed at Manpur Patra sahi and Benga patia**	At village Tikar: Set up of Pump house at the existing source and new pipeline laying of 1KM along with stand post.	At village Mantira Construction of 2 Nos. of Bore well.	30	20
Women Empowerment							
Strengthening of women empowerment measures in peripheral villages	Focus on various livelihood programme through Self Help Group (SHG) for women empowerment in peripheral villages.		Livelihood promotion through SHG that include dairy farming, poultry, goatery, Phenyl making, Agarwati making, Wheat grinding at 30nos. of villages in 7 GP of Danagadi block.	Establishment of sanitary napkin unit at Danagadi. Tailoring training at village Damdorpur, Kiapada and Dhabahali.	Establishment of neem powder and turmeric powder making unit at Danagadi/Jakhapura. Mushroom farming at Danagadi, Jakhpura.	300	100
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 equipment s with interlocking facility with process to be in place for proposed expansion project. continuous emission monitoring, ambient air quality monitoring and effluent quality monitoring to be done. Periodical Ambient air quality monitoring to be done in buffer zone of plant site.			As per EMP budget of plant	
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 Jakhpura and Manpur.			20	7

Annexure -III

Report on De carbonization programme

JSL as Group Company has targeted to reach Net Zero emissions by 2050 and for the same strategized short and long term plans are developed and has started its journey towards Net Zero.

Projects have been identified under the following decarbonization levers

a) Energy Substitution:

- 7.3 MWp of floating solar plant already commissioned.
- 21 MWp rooftop solar plant installations is in Progress.
- Use of biomass & bio-fuel.
- Green hydrogen plant to replace ammonia cracking.
- Electricity for expansion capacity will be sourced from Renewable energy (Hybrid of Solar + Wind) round the clock.

b) Feedstock optimization & Circularity:

- Increasing scrap rate in certain grades.
- 100% utilization of Fly ash.
- Zero liquid discharge achieved.

c) Process Reconfiguration:

- Reduction in specific energy consumption.
- Overachieved the target of PAT cycle 2 and reduced 11% in specific energy consumption.
- Initiatives planned to improve efficiency.

d) Logistics Decarbonization:

- Launched 4 Electric vehicles inside the plant premises for employee commuting electric buses procurement is in process.
- Exploring LNG as a logistic fuel Fleet electrification of heavy-duty vehicles and in house material handling equipment's .
- Switch from Road to Rail for in/out bound logistics.

e) Digitalization:

- ESG Compass tool launched to monitor the GHG emissions and One stop shop for all ESG related data and compliances.

f) Sustainable Suppliers:

- Awareness sessions to suppliers for adopting measures to reduce emissions in their process.
- Awareness session conducted for 150+ suppliers.
- Procurement policies incorporating ESG and carbon emission criteria are under process.

CER activities – EC granted on 18.09.2019

CER ACTIVITIES (PH ISSUES)	YEAR 1	YEAR 2	YEAR 3	TOTAL	Status as on date	Amount Spent (Rs. In Lakh)
	(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 Mulasir.	*	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 Gardpur village	10	*	*	**10**	Restoration work of disconnected water pipe line have been completed at village Kantipur	**8**
Community Environmental Protection Programme * 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	**25**

					at village Nuagaon.	
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.	**12**
Health Support towards establishment of a medical centre in Marutikar in consultation with the local administration.	18	16	16	**50**	Set up of Homeopathy clinic work at Ollala and kumbhiragadia village is under progress	**20**
Strengthening Malaria Eradication progrmme in Marutikar.	15	10	5	**30**	Malaria Eradication programme completed at village Chingudipal and Nagada	**18**
Support towards strengthening of health facilities in villages of Kacherigan (Kidney ailment) and Trijanga (health of children residing in the R & R colony)	15	10	5	**30**	Support is being provided in strengthening of health facility by providing medicine and doctor with mobile van at 17 nos. of villages	**30**
Health Assessment study for cancer & diarrhea in Kumbhuria and Kidney ailments in Kacherigan.	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.	**45**
Total				**549**		**496**

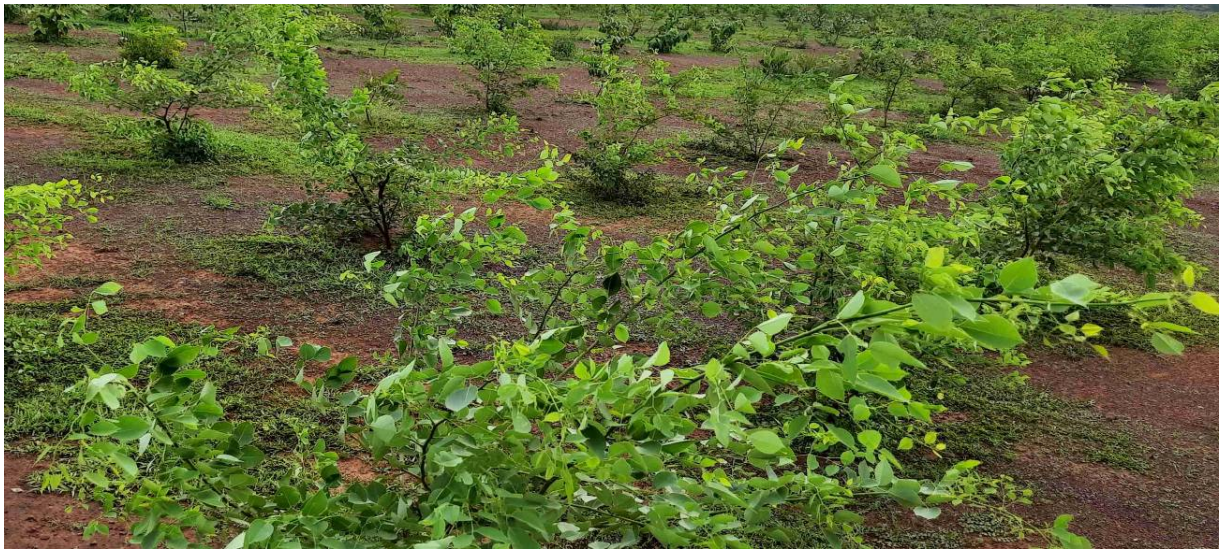
CER ACTIVITIES FROM NEEDS ASSESSMENT	YEAR 1	YEAR 2	YEAR 3	TOTAL	Status as on date	Amount Spent (Rs. In Lakh
	(Rs. In Lakh)					
Drinking Water Pipeline, pump house and bore well with solar power at Dankagadia Adivsi Sahi, Manatira Harijan Sahi and Village of Balungabandi and Dhapanki	16	14	10	**40**	Pipe line laying work with pump house and bore well with electrification has been completed at Manpur Patrasahi, Sulia and Kantipur village. Pipe line laying work with pump house and bore well for water supply through Solar power system at Mantira Adivasi sahi.	**22**
Repair & Reinstallation of the Pump used by Villagers in Kantipur	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**
Local Infrastructure Development programme						
Electricity expenditure along with installation of transformer at Brahman Sahi	10	5	*	**15**	Electricity expenditure along with street light installation at Manpur road have been completed.	**10**

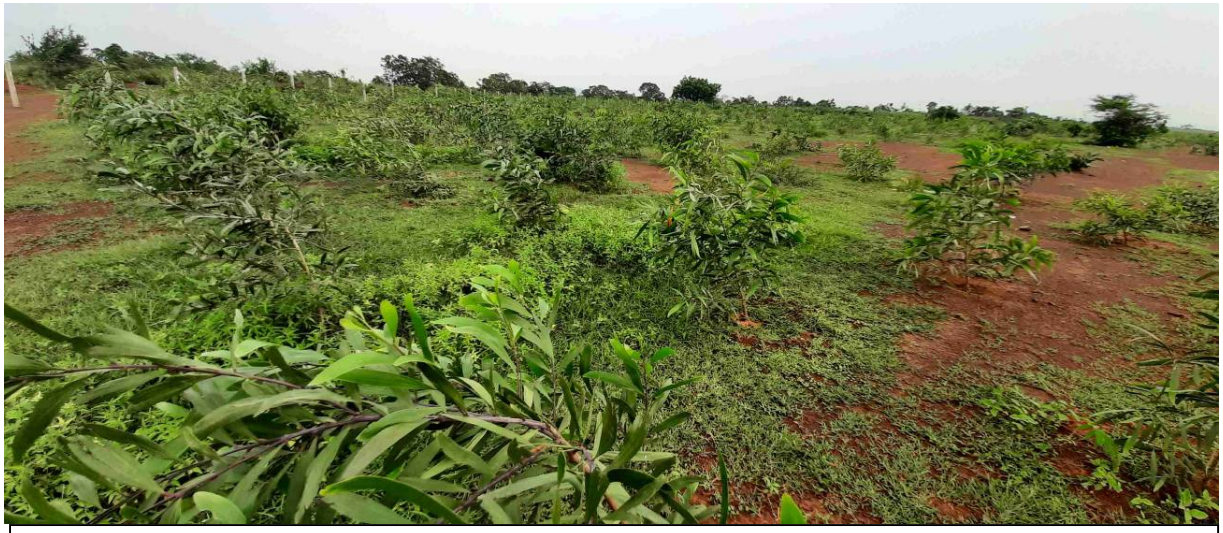
Renovation of community center used by local villagers, Media & Administration at Sukinda Bhavan	15	*	*	**15**	Renovation of community center used by local villagers, Media & Administration at Sukinda Bhavan have been completed.	**14**
* Renovation of community center used by local villagers, Media & Administration at Danagadi Bhavan	15	*	*	**15**	Renovation of community center used by local villagers, Media & Administration at Danagadi Bhavan have been completed. Construction of Nodal Up School Boundary Wall in Trijanga Village has been completed.Entrance gate and back side of kantipur colony gate coloring.	**28**
* Renovation of community Hall in Mangobindapur	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	**8**
Local Skill & Vocational Training * Stainless Steel Skill Development at Government polytechnic, Ragadi, Jajpur	25	25	25	**75**	Stainless Steel Skill Development at Government polytechnic, Ragadi, Jajpur is regularly under 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 under going	**8**
Total				**280**		**204**

Annexure - V

Plantation programme as per EC specific condition no. (iv) vide MoEF&CC letter no. J-11011/281/2007-IA-II(I) dated 18.09.2019

Block plantation of 23000 nos. of saplings have been carried out at Village Ambasar, Tehsil – Sukinda, Dist – Jajpur over an area of 35 Acres.





Plantation of 6000 nos. of saplings have been carried out at Village Nadiabhanga, Duburi, Dist – Jajpur over an area of 8 Acres.

JINDAL STAINLESS

Environment, Health & Safety Management Policy

Jindal Stainless Limited is committed to protect the Environment and long term sustainable development through abiding Environmental Norms and various conditions stipulated by Statutory Authorities. Our constant endeavour is to safe guard the Environment and the community residing in the immediate vicinity of the Plant. The Environmental and Social responsibilities are binding with our business goal.

We strive to evolve and implement our Corporate Environmental Policy to comply with the Environmental laws, regulation and the condition of Environmental Clearance, Consent to Establish, Consent to Operate and other applicable rules and regulation.

We are committed to :

i) Operate the plant facilities in compliance with the applicable Rules and Regulation related to Environment, Health and Safety of all the stakeholders.

ii) Continual improvement of the Environmental Performance through Resource Conservation, Reduction in emission & discharge, Waste minimization and Life Cycle Assessment.

iii) Develop and maintain greenbelt in and around our operating Plant.

iv) Aim to achieve zero accident in our operation.

The mechanism of reporting any non-compliance, accident – incident and investigation system shall be as per the approved procedure laid down in Management System manual.

Date : 05 June, 2018
Place : Jajpur Plant

Tarun Khulbe
Director & COO

Jindal Stainless Ltd.
CIN: L26922HR1980PLC010901
Corporate Office: Jindal Centre, 12 Bhikaiji Cama Place, New Delhi - 110066, India
Registered Office: O.P. Jindal Marg, Hisar - 125005 (Haryana) India
T: +91 11 26188345, 41462000, 61462000 **F:** +91 11 41659169 **E:** info@jindalstainless.com
Website: www.jindalstainless.com

JINDAL

Annexure - VII

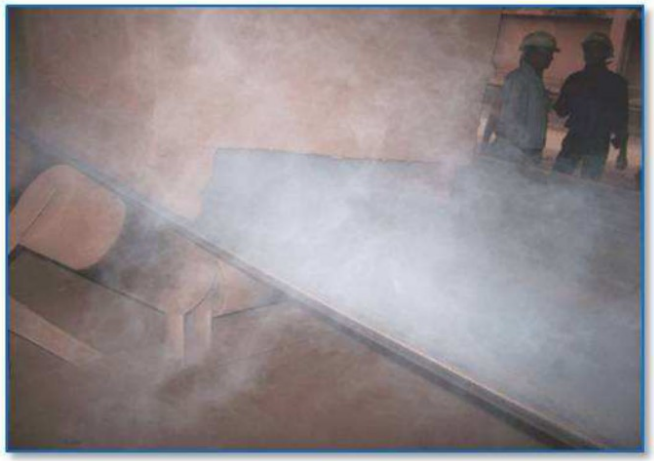
Air Pollution Control System

ESP at CPP

Bag House at Ferro-Alloys

Bag House at SMS

Pulsejet bag house used to control dust emission



Dry Fog Dust Suppression System at Conveyors

Annexure – VIII

Road Dust Minimization Initiatives: Engagement of Water Tanker , Fixed Type Water Sprinkler & Road Sweeping Machine:

Dulavo-100, Industrial Sweeping Machine in action at JSL

Tanker spraying water on road at JSL

Water Sprinklers at Ferro-Alloys

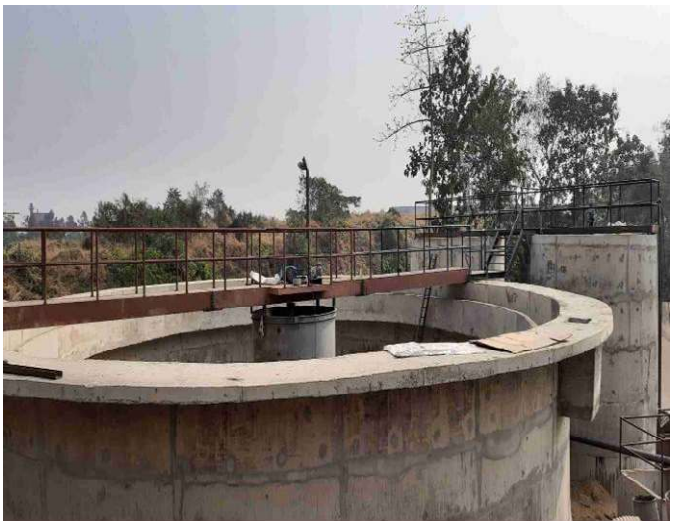
Water sprinklers at CRM

Annexure – IX

REVERSE OSMOSIS PLANT

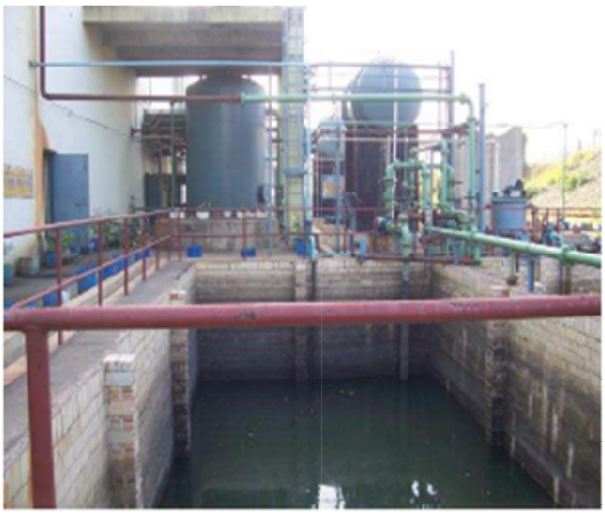
Annexure - X

Waste Water Treatment Facility



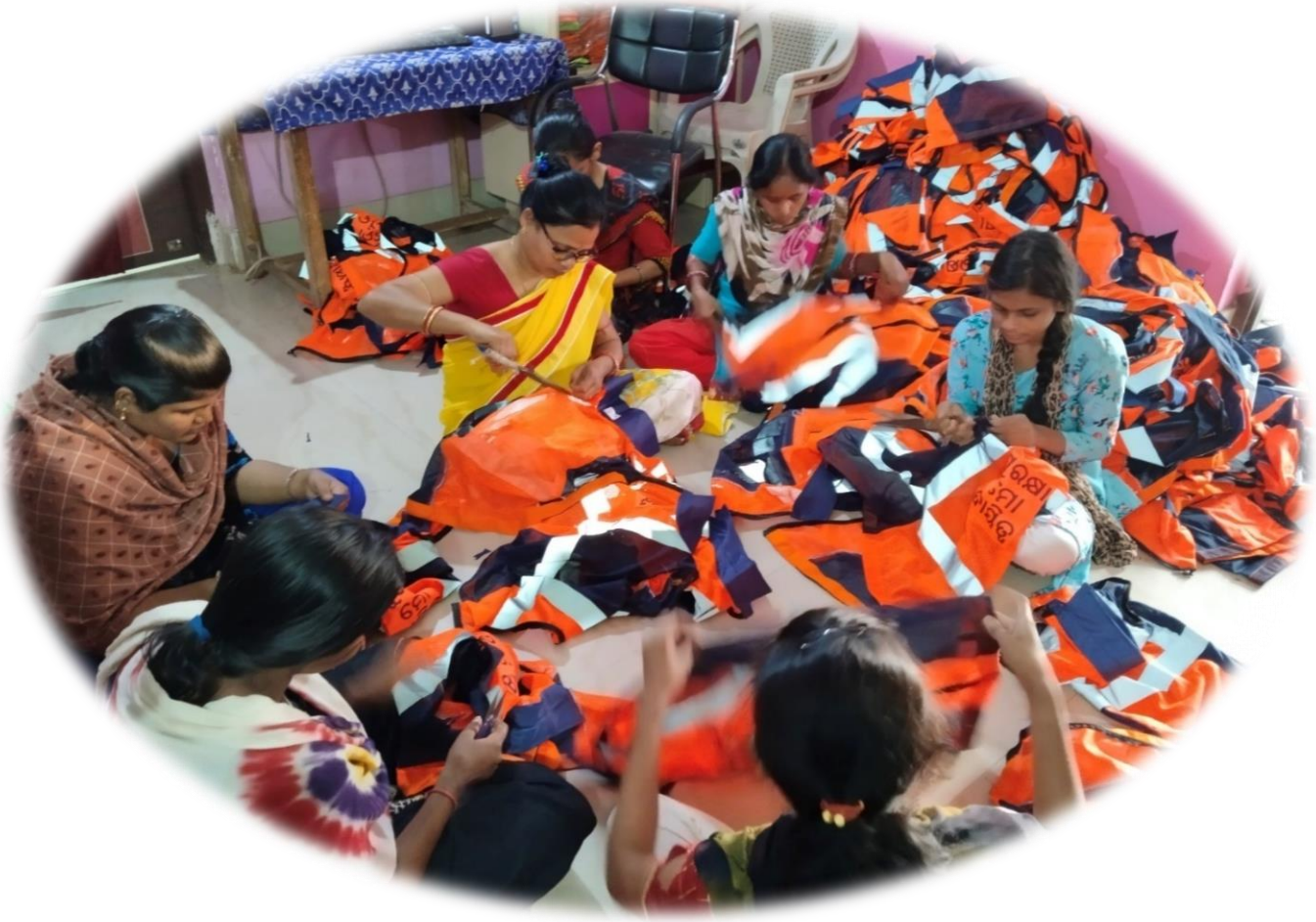
ETP for surface runoff treatment

ETP at CRM



Neutralization Pit at
DM Plant, CPP

ANNUAL REPORT



Corporate Social Responsibility-2022-23

Enriching Lives..... Bringing Smile

Prepared by:-
JSL CSR Team
Kalinganagar, Jajpur, Odisha

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About JSL CSR JAJPUR

Established in 2008, the JSL Foundation focuses on the wellbeing of the less privileged. For more than 15 years, it has driven social upliftment programmes in the rural hinterland of Kalinganagar in the Jajpur district of Odisha. The foundation's efforts are aligned with the Sustainable Development Goals of the United Nations. We have presence in 30 villages of 7 GPs in 3 blocks of Jajpur districts. With a team of dedicated development professionals, the JSF is putting its efforts into bringing about a substantial change in the lives and livelihoods of people in the villages surrounding its plant and mine operations.

BENEFICIARY QUOTES

Ray of Hope

When I was struggling to get rid of the adverse economic condition of my family, Jindal Stainless Foundation stood with me and showed me the path to overcome the darkness in my life. I had 10 goats of Black Bengal varieties from which I was earning Rs. 20,000–30,000 per annum, which was not enough to maintain my six-headed family. At

Mrs. Dalimba Mallick
Balungabandi,Danagadi,Jajpur
Odisha

Mushroom Cultivation:- Brings better tomorrow……..

"Since the year 2012, I have been a simple housewife. My husband was working as a daily labourer at that time. The meagre income earned by my husband was not enough to maintain the family. When I was trying to overcome this tragedy in our lives, Jindal Stainless Foundation showed me a way to start mushroom cultivation. Jindal Stainless Foundation provided me support in terms of training, input, and marketing and encouraged me to start up the venture on a large scale. Now I earn Rs. 10,000 to Rs. 12,000 per month from mushroom cultivation. The money earned from the business helps me provide education for my daughter. It brought better days for me and my family as well. I am thankful to the Jindal Stainless Foundation for providing me with support and making me a mushroom lady in the area."

Mrs. Gouri Patra,Trijanga,Danagadi

EXECUTIVE SUMMARY

- Jindal Stainless Foundation signed a MoU with Green Dream Foundation (GDF), a national-level NGO, to execute the waste management project in three villages in Danagadi Block. A series of activities like HH survey, awareness meetings on solid waste management, waste collection from villages, etc. carried out under the project during the year.
- 3720 persons received free health care services from the Static Health Care Centre in Trijanga, and 12 critical patients referred for higher treatment.
- 1200 persons from five villages made aware of various health-related topics like Dengue, Malaria, Sunstroke etc..
- Health care services provided to 546 people from seven villages through the Mobile Health Camp, and 12 elderly people received health care services at their doorsteps.
- Eye check up camp for the truckers, in partnership with the Prabhaav Foundation and the AK Institute of Ophthalmology, New Delhi, held in the month of September and December, 2022 at the Railway Gate and Rohit Gate inside the plant premises, where 2506 truckers underwent the eye test and provide spectacles to 703 persons.
- Under the Club Foot Elimination Project in partnership with Club Foot India Trust (CIIT), 4,640 clubfoot children enrolled their names to get the treatment.
- JIIT Electrical Workshop received a work order of Rs. 5,25,100/- from various vendors and executed the work on time.
- 133 underprivileged youths imparted training on the OS-CIT (Odisha State Certificate in Information Technology) course on Job Readiness Program for youths.
- 24 trainees were provided certificates on successfully completion of their training on Beauty and Wellness
- During the year, ASMITA received orders from various agencies for stitching and supply of 6214 safety jackets, 1500 nose masks, 3122 school uniforms, and 60 women's caps etc.
- *Under the SAHAJA Project, 5711 Sanitary Napkins packets were made and sold by the SHG members involved in this unit*
- 210 trainees, including women and girls, received a six-month tailoring training course from the tailoring training centre running in six villages of Danagadi Block.
- Three E-Rickshaws provided to the women SHGs to ease their commuting for various SHG-related works, particularly livelihood promotion activities in their locality.
- Under the Neem Leaf project, the women SHG members from Asanabahali, Manatira, Nimapalli, Solei, and Dhuligrh villages collected and handed over 700 kg of Neem leaves to Jubilant Foundation, Gujurat
- Hon'ble Union Minister of Steel Mr. Ramchandra Prasad Singh, IAS visited Jindal Stainless Limited on April 29, 2022, and interacted with five SHG leaders associated with the CSR department of the JSL Foundation regarding their journey towards economic and social upliftment with the support of the Jindal Stainless Foundation.
- A ten-day skill development training programme was organised for the SHG members of Manapur and Jakhapura villages in which an external resource person and CSR field staff imparted training to women on food processing, agarbathi, phenyl , candle making, pickling, etc.
- A three-month-long training programme on ***appliqué work launched*** on December 12, 2022, in Alekhpur Tailoring Training Centre with the enrollment of 20 underprivileged girls and women from the village.
- As a measure to enhance the marketing of products produced by Asmita, Sanjeevani, the Jindal Foundation signed a MoU with ICCo, New Delhi in the month of March.

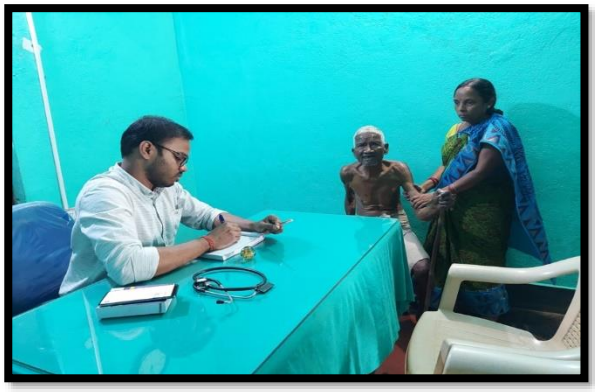
- Jindal Stainless Foundation observed International Women's Day at different skill centres on 8th March-2023, in which the women SHG members, trainees of tailoring training centres, ASMITA, ASMITA Boutiques, JIIT computer centre, beauty and wellness centre, etc. participated enthusiastically.
- Mr. Abhudaya Jindal, Mrs. Sristi Ray Jindal, and their daughter Araya visited Asmita on April 30, 2022, and interacted with the girls about the stitching work being undertaken by them.
- Sampanna Jeevika Producer Company Pvt. Ltd. (SJPCL) participated in Entrepreneurs Week 2023 from March 5 to 9, 2023, organised by the Directorate of Industries/MSME Department through the District Industries Centre (DIC) at Sanskruti Bhawan, Jajpur Road, in which SHG members displayed their products like spices, sanitary napkins, phenyl, wheat flour, besan, sattu, etc.
- Three Asmita Boutiques located at Solei, Rabana, and Kaitha villages are being run successfully by the ex-trainers of tailoring training centres, engaging nine underprivileged girls from the area.
- The Fire and Safety Department organised training on Fire and Safety at Ollala High School and Ollala Project Nodal UP School, in which about 300 students were trained
- The village library functioning at Hudishai, Trijanga, Trijanga and Danagadi is running effectively.
- Under the Literature Development programme, Ankur Foundation, a partner NGO of JSL Foundation, organised a painting competition among the students dwelling in slums in Bhubaneswar and Rayagada.
- MoU signed with the Government Polytechnic, Jajpur, to train 60 youths in Stainless Steel Fabrication every year in three batches
- Two subject teachers were deployed at Budhraja High School, Danagadi, to teach science and computer training to the students pursuing education from std. VII to X.
- Five kids from Danagadi and Sukinda deputed to the SUDEVA Football Coaching Academy, New Delhi, to undergo training on Football sports
- 16 kids of 10–14 age group from Kalarangi village enrolled to undergo football coaching at Kaliapani Mines under the tutelage of an expert trainer.
- On December 21, 2022, CSR Department organised an Annual sports event amongst the youth, in which around 200 participants, including girls and boys, from all the skill training and production centres participated with enthusiasm and high spirit.
- Under the Doubling Farmers Income project, activities like training programmes on good agricultural practices on focus crops, farmers' access to markets to get an appropriate price for their vegetables, supplying quality agricultural inputs to farmers, etc. are carried out in the area.
- Solar photovoltaic irrigation system at two villages enabled 289 farmers to resume agriculture activities enthusiastically after maintenance.
- Students from SP Jain Institute of Management and Research (SPJIMR), Mumbai; IIM, Indore; NMIMS, Pune etc. were deployed for internship in the CSR department.

Glimpses of the Activities during the Year

OUR HEALTH CARE INITIATIVES

Static Clinic Centre, TRC

As a measure to provide free health care services to people at their doorsteps, JSL Foundation has been running one Static Clinic Centre at TRC, Danagadi, wherein people from surrounding communities are getting health care services to get rid of common ailments. During the year, 3720 people have received free health care services in the form of free consultations and free medicines to cure their common ailments, and 12 critical patients have been referred to other hospitals for higher treatments. The local community has strongly endorsed this noble endeavour by the company in the area.



Health Awareness camps

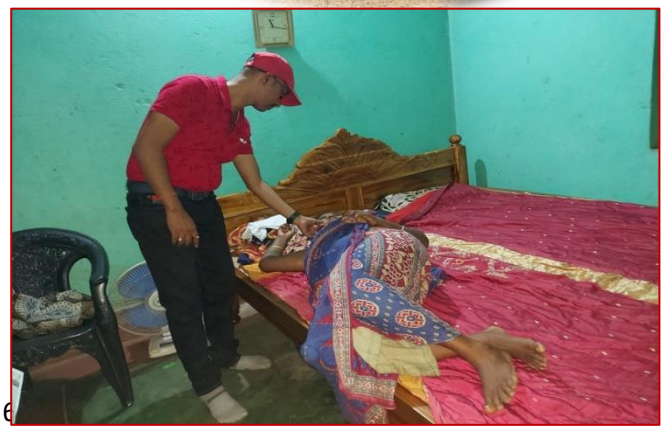
The CSR Team organised a series of health awareness camps on Dengue, Malaria, Sunstroke, etc. in villages like Jakhapura, Asanbahali, Balungabadi, Trijanaga colony, Hudisahi, Pankapala, etc. in order to protect people from the onset of various diseases. These camps covered the causes, symptoms, and prevention of these illnesses. About 1200 residents of these communities happily participated in the event and increased their knowledge of these health-related topics.

Health Camps in Villages

Aligning with the Sustainable Development Goals of the UN, JSL has been encompassing its focus to reach out health care services to each and every person living within its operational territory. Under this initiative, the medical team of JSF had organized free health camps in seven villages under the Danagadi block, from which 546 people benefited. This has brought happiness to the people dwelling in villages.

Health care service to elderly people at Doorstep

The Health Care Team launched a commendable work to provide medical care to the homes of the elderly and sick. They had visited the homes of those in need and offered the necessary medical care. The elderly persons received general care at their doorsteps



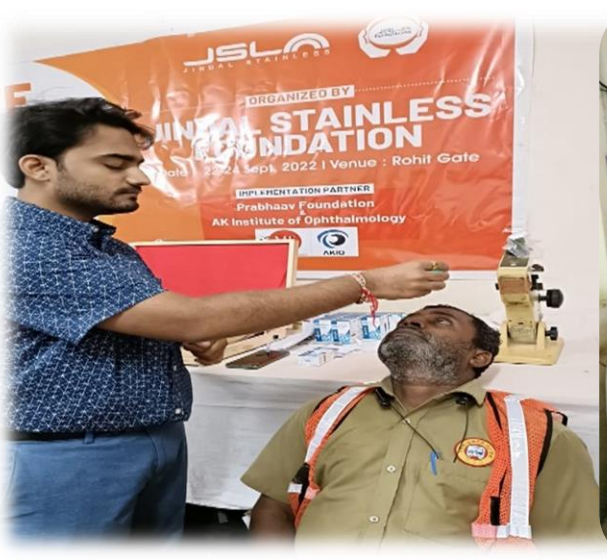
throughout the year, which has made them happy and disease free.

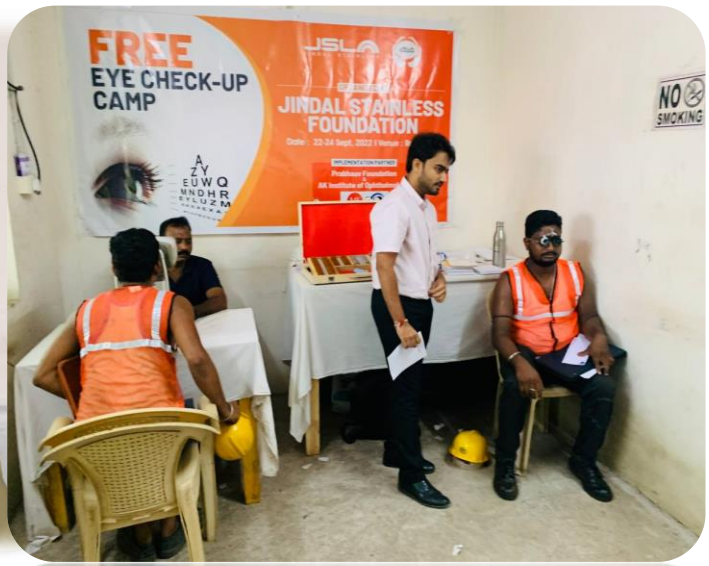
Project on Elimination of Disability from Clubfoot in Children

The project intends to find children who were born with clubfoot, treat them at no cost, and make therapy available to them. The project also aims to offer psychosocial counseling to the beneficiaries' parents in order to assist them in overcoming stress-related problems before and after treatment. The Club Foot Elimination Project, in which 75 children from Jajpur with clubfoot have enrolled and are receiving treatment. The project is being carried out by JSF in collaboration with the Club Foot India Trust. The children have enrolled and are getting treatment. The organisation is presently taking care of 75 kids, out of which 36 are from Jajpur District and are supported by Jindal Stainless Foundation. 25 children enrolled last year have been in regular contact with the counsellor and are visiting the clinic for follow-up.

Eye Screening Camp for Truckers

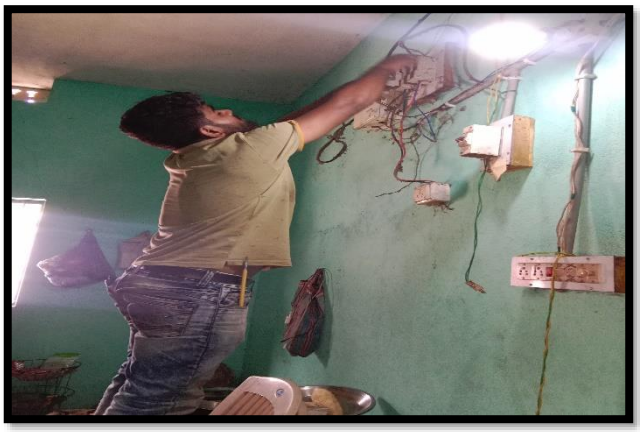
In India, Nine million truckers and transporters transport 65% of our national cargo by road. To make our roads safe, they need to be able to see clearly. Keeping this in mind, the CSR team had organised free eye screening camps for the truckers in partnership with the Prabhaav Foundation in the months of September and December-2022.a total of 2506 truckers underwent the eye screening





test. Mr. Deepak Agrawal, Unit Head, JSL Jajpur, formally inaugurated the programme and appreciated the CSR effort. It was the first of its kind, a screening camp specially organized for truckers at JSL. 703 persons were provided free spectacles through courier and by hand.

ENTREPRENEURSHIP DEVELOPMENT PROJECT

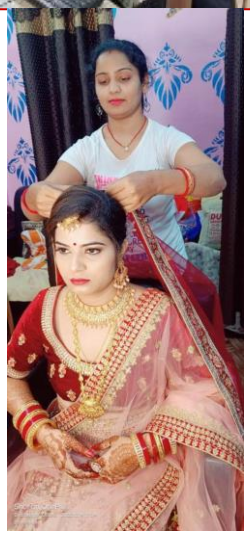


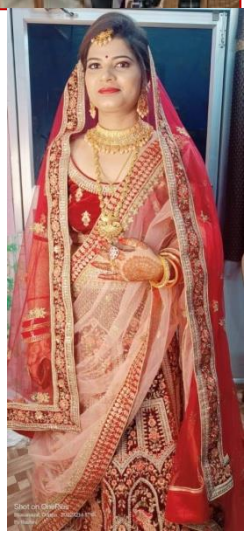
JIIT Electrical workshop

JIIT Electrical Workshop has been providing quality services in various electrical trades such as fan and motor repairs, house wiring etc. to various corporate clients like Jindal Stainless Ltd, Jajpur JUSCO, Ekalavya Residential School, Apartments and other private vendors on a regular basis. JIIT Electrical had received the order for the rewinding of fans amounting to Rs. 3,88,300/- from JSL under annual rate contract. The workshop had also received an order from Jindal Coke Limited amounting to Rs. 1,36,800 for the fixing of electrical items in 64 flats at Spring Villa apartment. Besides it has taken up the maintenance works of the water purification systems installed in schools by JSF. The electric connection to the Material Recovery Facility run by Green Dream Foundation were also done by the unit.

JIIT Computer Education Centre

During the year, 281 students completed their training *on* OS-CIT (Odisha State Certificate in Information Technology) course to school and college level students. In order to mobilise more students to get enrolled in OSCIT, PGDCA, DCA, and other career-oriented courses, the team conducted campaigns in various locations in the area. On March 2, 2023, Er. Priti Ranjan Gharai, Odisha's Minister of Rural Development, Skill Development, and Technical Education visited JIIT CEC, Danagadi, and Jajpur and expressed satisfaction with the students' performance. Moreover, a series of sports and cultural events were organized in both centers to unleash the hidden potential of these students.





Beauty & Wellness Training Centre

As a measure to provide employment opportunity to unemployed women and girls in the beauty and

wellness trade, JSF promoted beauty and wellness training centre at College square, Jajpur Road. The required infrastructure like chairs, inverter, AC, house rents etc. were provided to the centre to make it self sustainable in providing services and training.

Women Empowerment and Gender Equality

ASMITA Production Centre

ASMITA has gained immense expertise in stitching and supply of men's industrial safety jackets, student uniforms, nose masks, etc. over the years. A total of 20 women SHG members have joined hands in this mission. During the year, ASMITA had received orders from various agencies for the stitching of 6214 safety jackets, 1500 nose masks, 3122 school uniforms, and 60 women's caps, thereby generating substantial income.

Training on appliqué works

A six month-long training programme on ***appliqué work was*** launched on December 12, 2022, at Alekhpur Tailoring Training Centre with the enrollment of 20 underprivileged girls and women from the village. The objective of the training was to empower women and improve self-employment and livelihood opportunity in the region. Through this workshop, the members of SHGs gained skills in applique art that could provide them with additional income opportunities.

SAHAJA Project

Addressing the challenges around personal hygiene for women and adolescent girls, the women SHG members of Trijanga village have been preparing low-cost sanitary napkins, namely "SAHAJA," under the tutelage of the JSL Foundation. During the year, an "Automatic -30" machine with the capacity to produce 30 ultra-thin sanitary napkins per minute is being provided to the group. The CSR Team has carried out a number of awareness camps in villages to make people, including women and girls, aware of the hygienic use of sanitary napkins. During the year, hundreds of sanitary napkins were made and sold in the market.

Sampanna Jeevika Producer Company

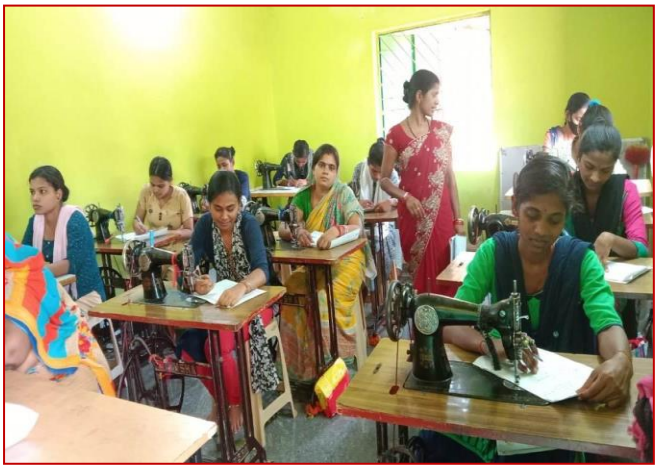
Sampanna Jeevika Producer Company Limited (SJPCL) was established to help more than 2500 women SHG members become socially and economically independent. It has 105 shareholders. A total of 447 SHG members work hard to support their families by engaging in a variety of income-generating activities such as mushroom cultivation, poultry farming, pisciculture, goat rearing spice processing etc. These SHG members' life and means of subsistence have undergone a discernible alteration as a result of the programme. The CSR team has been closely monitoring these income generating activities and providing feedback to the SHG members in order to make all IGAs appropriate and profitable.

MoU signed with ICCo NGO

As a measure to enhance the marketing of products produced by Asmita, Sanjeevani, the Jindal Foundation has signed a MoU with ICCo NGO, New Delhi, in the month of March-23. The objective of the project is to make the livelihood activities of women SHGs sustainable.

Tailoring Training Center

With a broader objective of skilling unemployed women and girls in the rural and remote areas, JSF opened six tailoring training centres at Alekhapur, Danagadi, Kiapada, Ranagundi, Dhabahali, and Damodarpur villages, wherein 210 girls and women undergone six months tailoring training under the tutelage of expert trainers. Out of them, certificates were provided to 106 students for successful completion of the course. In order to scale up the soft skills expertise of the trainees, various soft skill sessions on communication, customer relationship management, basic knowledge of accounting etc. were conducted.



E- Rickshaw Provided to SHGs

To promote self-employment and sustainable livelihood opportunities, three E-Rickshaws are being

provided to three SHGs, namely Khandurai, Maa Santoshi, and Tulashi SHGs of Danagadi block, which have become a great relief for the SHGs in travelling for SHG-related works required for livelihood promotion activities. The initiative has become a source of income for these SHGs and brought about a visible transformation in their socio economic profile.

SHG Training

A ten-day skill development training programme was organised for the SHG members of Manapur and Jakhapura villages in which an external resource person and CSR field staff imparted training to women on food processing, agarbathi, phenyl and candle making, pickling, etc. A total of 42 SHG members received the training and acquired extensive knowledge on various entrepreneur skill.

Asmita Boutique

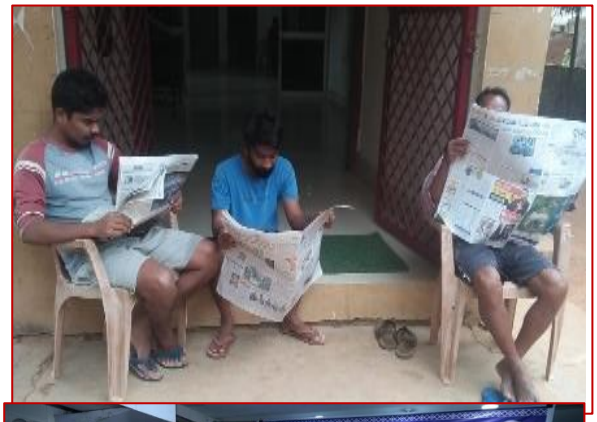
Three Asmita Boutiques located at Solei, Rabana, and Kaitha villages are being running successfully by the ex-trainers of tailoring training centres. They in turn engage nine other underprivileged girls. Ms. Premalata Behera, a Dibyang girl running her shop. She provides tailoring training to 12 underprivileged girls from her village.

Annual Sports event

On December 21, 2023, the CSR Department organised an Annual sports event amongst the youth of the skill training centres. Around 200 participants, including girls and boys, from all the skill training and production centers participated in different traditional sports activities such as running, Skipping, Music chair etc. with lot of enthusiasm and high spirit. Around 1500 people from nearby villages witnessed the event.

EDUCATION & SKILL TRAINING

Village Library project



The village library is functioning at Hudisahi and covering the villages, Hudisahi, Siaria and Bainsipur. A total of 7080 readers visited the village library to read a variety of library books throughout the reporting period, expanding their knowledge in a range of subjects. It is a CSR opportunity of JSL Foundation to empower and educate the general public.

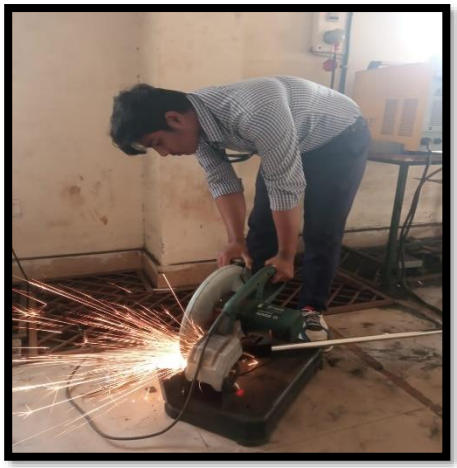
Literature Development Programme

JSL foundation in association with the Ankur Foundation, had organised literary festival and organised different competitions amongst the slum children and other schools of Odisha. The aim of the project was to bring out the hidden potential of the students. At the end of the event, copies and slates were provided to the students.

Fire and safety training is organised in schools.

Fire safety training teaches a set of practises and procedures to minimise the destruction caused by fire hazards. The Fire and Safety Department of our company organised training on fire and safety at Ollala High School and Ollala Project Nodal UP School in which students were taught about the skills and knowledge required to combat fire in any unanticipated fire breakout. Around 300 kids from grades VI to IX benefitted from the training and participated in practical firefighting sessions. Moreover, various fire extinguishers were demonstrated to the students to raise awareness.

Stainless Steel Fabrication Training at the Government Polytechnic

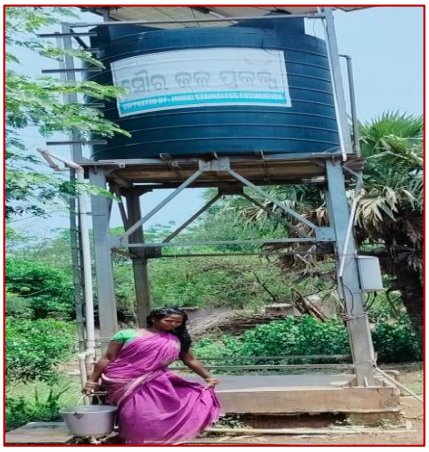


Jindal Stainless Limited signed a MoU with the Government Polytechnic, Jajpur, to train 60 youths in stainless steel fabrication every year in three batches, i.e., 20 trainees in each batch. Mr. Deepak Agrawal, Unit Head, JSL, was invited by the institute to distribute certificates to the passed-out trainees.

Teachers support to school

As a measure to impart quality education to the students reading in School, JSL Foundation had deployed two experienced teachers at Budharaja High School, Danagadi who are imparting teaching to the students of Class IX and X in Science and computer subjects under the supervision of School administration. Apart from this, teachers conducted the Examinations and various curricular activities among the students.

Safe Drinking Water Project



Seven water purification systems are being installed, and regular maintenance is also done by Jindal Stainless Foundation to ensure a timely and regular supply of water during the reporting period. A total of 5564 kids and school staffs from seven different schools are nourishing benefits of the project. Besides, solar phto voltaic overhead water projects have been installed in Manatria Mundasahi and Puruna Manatira villages have been benefitting 80 households for washing, bathing and using water for their houses.

Foot Ball Coaching

Unleashing sports potentialities of the budding sports talents is one of the prime initiatives of JSF over the years. Under this initiative, five selected kids from Danagadi and Sukinda have been deployed at SUDEVA Football Coaching Academy, Delhi to undergo coaching on Football. They have been given opportunity to play various national tournaments thereby augmenting their sporting experience and talents. Two kids are selected to be further trained at Spain.

Football Coaching at Kaliapani:

One Football Coaching centre is going on at Kaliapani Mines in which sixteen seven kids of 10- 14 years of age are undergoing training.

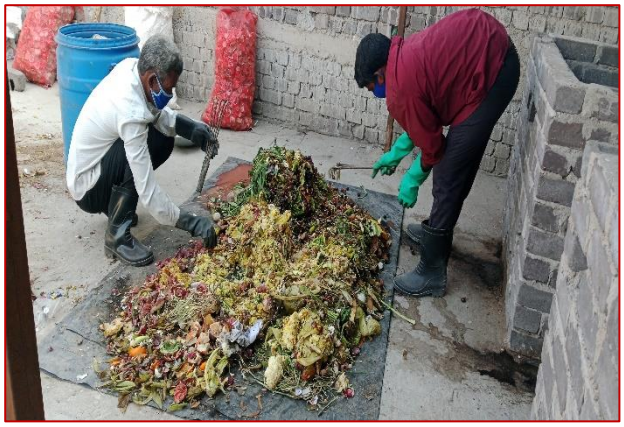
RURAL DEVELOPMENT PROJECTS

Doubling Income Project @Glance

Jindal Stainless Foundation in partnership with the Department of Agriculture, Govt. of Odisha and Gram Unnati Foundation (GUF) have launched the 'Doubling Farmers' Income' project. The project's focus on diversification of farming towards dairy, horticulture, floriculture, aquaculture, agro-forestry, apiculture etc. is aligned to the Government of India's DFI agenda. Activities like training support to farmers on good agricultural practices on focused crops, interaction and field visit of 1855 farmers. Established market linkage for selling of Groundnuts, ensuring quality agri.inputs supply to farmers on time etc. were carried out in the area.

Sustainable Waste Management Project

The JSL Foundation, in partnership with Green Dream Foundation, has been implementing a project on sustainable waste management in Solei, Singagadia, Manpur, and TRC villages with a broader objective of improving the welfare and capacity building of informal waste pickers, setting up basic infrastructure, conducting IEC activities to sensitise the people on waste segregation and sustainable waste management, and improving the state of waste management in the above-mentioned villages. Setting up a local IEC (Information, Education, and Communication) team, mapping and surveying villages, finalising land and signing a lease for the material recovery facility, identifying waste collectors, establishing the material recovery facility, starting waste collection, water supply provisioning for the material recovery facility unit, etc. were carried out during the year. The project has benefitted about 4444 households from four villages in terms of keeping their surroundings clean and garbage-free to a substantial extent.

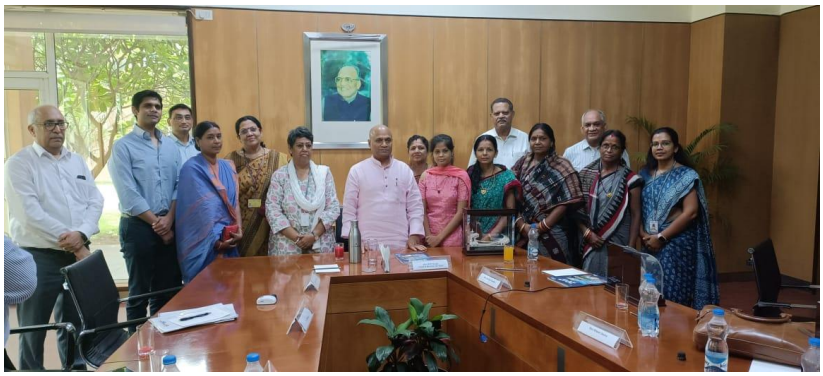


Important Visitors

During the reporting period, a number of significant visitors had paid visit to various CSR projects in Jajpur and interacted with the beneficiaries. On April 30, 2022, Mr. Abhudaya Jindal, Managing Director, JSL and Mrs. Sristi Ray Jindal, and their daughter Araya visited Asmita. They spoke with the

girls about the sewing projects that they were working on.
Four students from The SP Jain Institute of Management and Research (SPJIMR), Mumbai were deployed in Doubling Farmers Income Project" and "Sahaja" initiatives for a one-month internship. The "Doubling Farmer's Income Project" study was given to two interns whilst the "Study on Consumer Preferences towards Sanitary Practices and the Scope of Sahaja Sanitary Unit to Scale Up" study was given to two other interns.

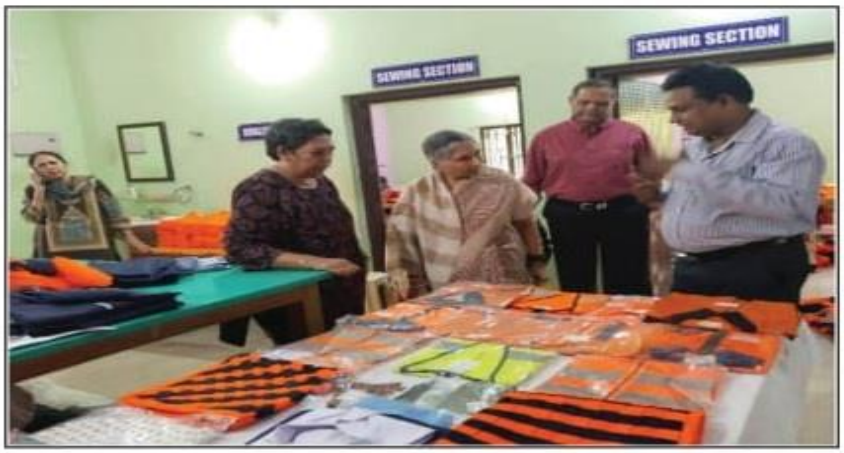
Cabinet Minister, Steel Interacted with SHG members:



Hon'ble Mr. Ramchandra Prasad Singh, IAS, Cabinet Minister, Steel visited Jindal Stainless Limited on 29 April 2022. Five SHG leaders associated with CSR department interacted with him and narrated about their own stories regarding how they have started their journey towards economic and social upliftment with the support of Jindal Stainless Foundation. He was shown micro video regarding the story of Meerabai SHG and shown the products produced by the women SHGs.

Media Clippings

Jindal Stainless Foundation Chairman's visit to various CSR program



JAJPUR,(AOBureau): Mrs. Deepika Jindal, Chairperson, Jindal Stainless Foundation and Ms. Savitri Devi Jindal, Chairperson, Jindal Group of Industries, visited the various social philanthropy projects run by Jindal Stainless Ltd on 03.11.2022. They first, visited Solei Sewing Training Centre, Dangadi, JIIT Electrical Workshop, Sahaj Sanitary Napkin Making Unit, Asmita Production Centre, Waste Material Management Centre, Dangadi and emphasized on the quality and value of each work. Later, she attended a meeting organized by women SHGs at Bagei Mahadev Temple premises in Balungabandi village, observed the quality of masalas prepared by women and expressed all necessary cooperation for mass marketing. The Bagei Mahadev temple and its premises have been developed by the Jindal Company at a cost of Rs 32 lakhs. Apart from this, members and workers have published autobiographies of how they have developed by being associated with Jindal Foundation for the last 10/12 years. Seeing that Deepika Devi and Savitri Devi gained self-satisfaction and further discussed how the development of women and the quality of computer education can be improved. The visit was attended by Brigadier Rajeev Williams, CSR Corporate Head of Jindal Stainless Ltd., Ms. Sangeeta Singh, Mr. Sukanta Kumar Rath, Mr. Sanjay Kumar Mohanty, Mr. H[illegible] Kuma[illegible] B[illegible] the staff of Jindal Stainless Foundation, Jajpur.

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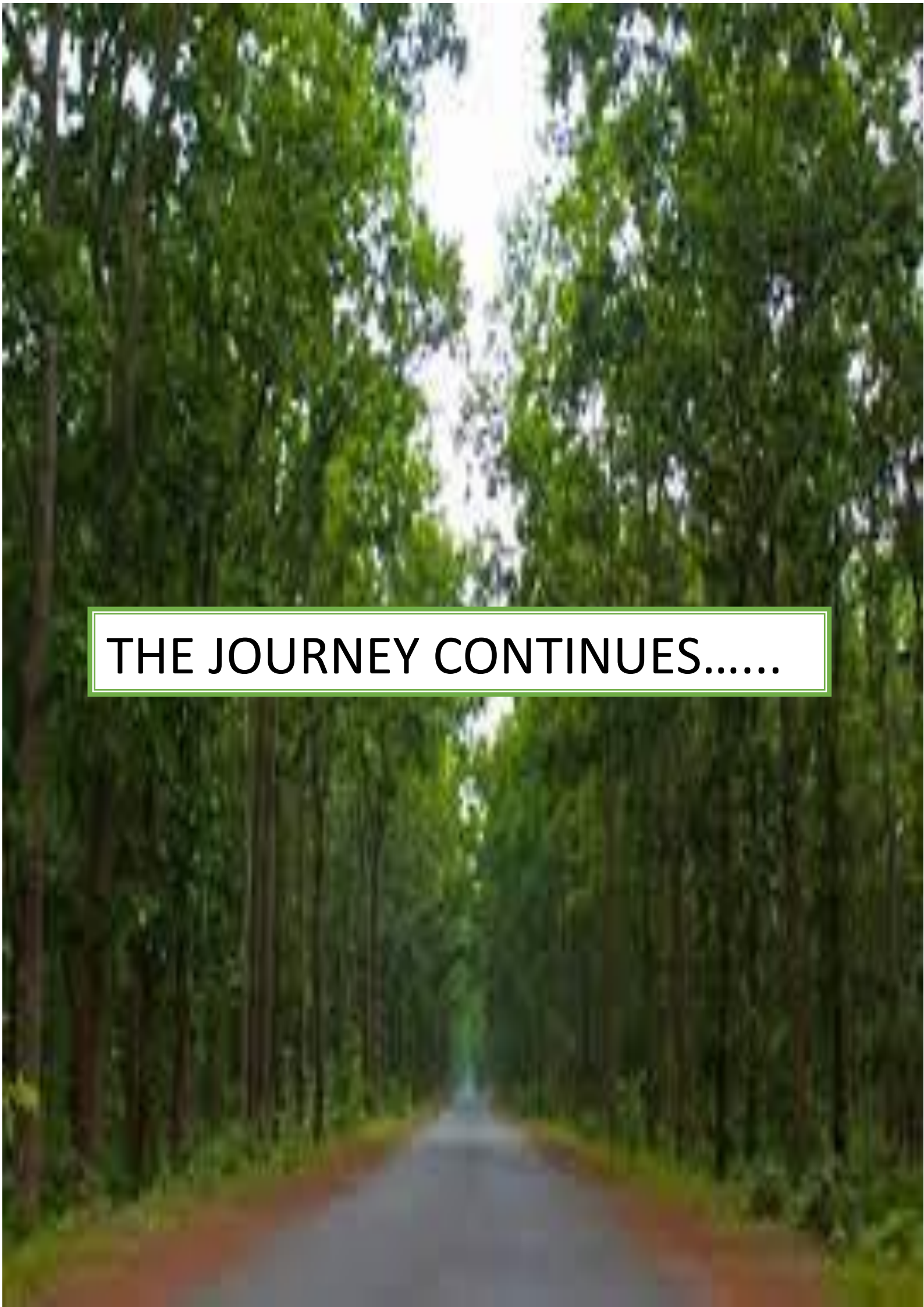
THE JOURNEY CONTINUES……

Environmental Monitoring Report for the Period

October - 2022 to March - 2023

INDEX

A. Stack Analysis

B. Ambient Air Quality

C. Noise Monitoring

D. Ground Water Quality

E. Treated Effluent Quality At Final Collection Point

A. Stack Analysis:

Monitoring Results of Stack Analysis								
Sl. No.	**Sampling Stations**	**Monthly Average Concentration of Particulate Matter (mg/Nm^3)**						
		Oct. - 22	**Nov. - 22**	**Dec. - 22**	**Jan. -23**	**Feb. - 23**	**March. - 23**	**Permissible limits as per SPCB**
1	FAP (SAF – 3)	34.2	44.1	40.6	42.4	40.6	45.8	**100**
2	FAP (SAF – 4 & 5)	39.7	49.4	47.4	53.5	62.6	61.5	
3	SMS (EAF Furnace Stack)	36.0	36.6	40.1	17.8	19.8	35.6	
4	SMS (AOD Furnace Stack)	48.5	39.3	34.2	20.8	18.2	24.6	
5	CRM (Shot Blaster Stack)	75.2	78.2	75.8	78.2	75.4	70.8	
6	CPP- 1	45.2	46.8	42.6	38.4	36.2	41.0	**50**
7	CPP - 2	47.4	42.6	44.8	42.2	41.8	45.6	

B. Ambient Air Monitoring Report:

AAQ near Nursery

Sl. No.	Parameters	Monthly Average concentration						
		Oct. - 22	Nov. - 22	Dec. - 22	Jan. -23	Feb. - 23	March. - 23	Permissible limits as per SPCB
1	PM_{10} µg/m³	52.8	58.2	62.8	71.8	68.8	72.4	100(24 Hrs)
2	$PM_{2.5}$ µg/m³	27.3	28.4	30.2	32.6	30.2	34.2	60 (24 Hrs)
3	SO_2 µg/m³	17.6	18.0	18.8	20.2	19.4	21.6	80(24 Hrs)
4	NO_x µg/m³	12.8	13.2	14.6	15.6	15.2	17.2	80(24 Hrs)
NB: Parameters such as Lead, Ozone, Ammonia, Benzene, Benzopyrene, Arsenic & Nickel found to be below detection limit (BDL).								

AAQ near Security Barrack

Sl. No.	Parameters	Monthly Average concentration						
		Oct. - 22	Nov. - 22	Dec. - 22	Jan. -23	Feb. - 23	March. - 23	Permissible limits as per SPCB
1	PM_{10} µg/m³	77.6	78.2	77.6	79.6	80.6	82.1	100(24 Hrs)
2	$PM_{2.5}$ µg/m³	35.9	35.6	35.2	38.4	38.8	39.6	60 (24 Hrs)
3	SO_2 µg/m³	22.8	23.2	23.4	24.8	25.2	27.4	80(24 Hrs)
4	NO_x µg/m³	16.6	16.8	17.0	19.2	19.4	19.8	80(24 Hrs)
NB: Parameters such as Lead, Ozone, Ammonia, Benzene, Benzopyrene, Arsenic & Nickel found to be below detection limit (BDL).								

AAQ near CPP Area

Sl. No.	Parameters	Monthly Average concentration						
		Oct. - 22	Nov. - 22	Dec. - 22	Jan. -23	Feb. - 23	March. - 23	Permissible limits as per SPCB
1	PM_{10} µg/m³	75.1	73.8	78.2	78.8	79.4	81.6	100(24 Hrs)
2	$PM_{2.5}$ µg/m³	34.6	34.2	35.4	37.8	38.0	39.2	60 (24 Hrs)
3	SO_2 µg/m³	20.4	20.8	22.6	23.2	24.4	26.6	80(24 Hrs)
4	NO_x µg/m³	15.8	16.2	17.2	18.4	18.8	19.2	80(24 Hrs)
NB: Parameters such as Lead, Ozone, Ammonia, Benzene, Benz o pyrene, Arsenic & Nickel found to be below detection limit (BDL).								

AAQ near Tata Corner

Sl. No.	Parameters	Monthly Average concentration						
		Oct. - 22	Nov. - 22	Dec. - 22	Jan. -23	Feb. - 23	March. - 23	Permissible limits as per NAAQS, 2009
1	PM_{10} µg/m^3	70.2	71.6	71.6	79.2	77.4	79.4	100(24 Hrs)
2	$PM_{2.5}$ µg/m^3	32.8	32.6	32.6	38.1	36.4	37.8	60 (24 Hrs)
3	SO_2 µg/m^3	19.2	19.4	19.4	24.4	23.8	25.6	80(24 Hrs)
4	NO_x µg/m^3	14.2	14.6	14.6	18.6	18.2	18.8	80(24 Hrs)
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								
Sl. No.	Location	Monthly Average Noise Level						
		Oct. - 22	Nov. - 22	Dec. - 22	Jan. - 23	Feb. - 23	March. - 23	Permissible limits as per CPCB
		DAY TIME						
1.	At Nursery	59.8	60.2	62.2	64.0	66.2	68.2	75 dB(A)
2.	At Security Barrack	65.5	68.6	68.4	67.8	69.4	70.8	
3.	At Rohit Gate	62.1	64.1	66.4	69.8	68.6	67.9	
4.	At Tata Corner	62.7	63.8	65.1	65.7	64.2	66.3	
		NIGHT TIME						
1.	At Nursery	50.4	50.8	53.4	55.2	55.0	57.5	70 dB(A)
2.	At Security Barrack	58.0	58.4	56.7	56.2	56.4	58.1	
3.	At Rohit Gate	51.8	52.0	54.3	55.2	55.4	56.4	
4.	At Tata Corner	56.9	57.4	55.5	54.8	54.6	55.2	

b. Work Zone Noise Monitoring Data

Noise Level Monitoring Results at Different Locations of the Plant								
Sl no	Location	Monthly Average Noise Level (Leq in dB(A))						
		Oct. - 22	Nov. - 22	Dec. - 22	Jan. - 23	Feb. - 23	March. - 23	Permissible limits as per Factory Act
1	Near 60 MVA furnace	80.2	82.4	82.8	82.8	82.2	81.8	85 dB(A)
2	Near 26.7 MVA furnace	79.8	80.8	80.1	81.2	81.9	81.6	
3	Near Briquette plant office	78.3	79.6	78.8	78.6	78.4	79.2	
4	Near Jigging Plant - I	78.7	78.9	79.4	78.8	79.1	80.1	
5	Near EAF (SMS)	81.6	81.2	78.1	81.6	81.6	79.2	
6	Near AOD (SMS)	81.8	82.1	81.8	82.1	82.1	82.4	
7	Near Scrap Yard (SMS)	81.4	78.6	82.4	78.4	78.4	82.1	
8	Shot Bluster (CRM)	80.3	81.8	82.0	82.0	82.2	79.8	
9	Boiler Room (CRM)	81.8	80.1	80.4	80.4	80.2	80.6	
10	Compressor Room (CRM)	73.2	81.4	81.8	81.8	81.4	81.6	
11	HAPL Exit gate – I (CRM)	69.2	73.6	75.8	75.8	77.6	78.2	
12	Control Room (CPP)	80.8	68.8	68.4	69.2	70.1	72.2	
13	Near ESP (CPP)	79.8	81.2	81.6	82.0	81.9	82.0	
14	Near Cooling Tower(CPP)	81.4	80.2	81.0	81.6	81.4	81.6	
15	Near Boiler - 1 & 2 (CPP)	79.8	80.4	82.1	82.4	82.6	82.2	
16	T G Building (CPP)	80.6	81.0	81.8	81.8	82.0	81.9	
17	Compressor Room (CPP)	81.4	81.9	82.2	82.1	81.8	82.4	
18	Near Fire Station	67.2	68.2	69.6	70.4	71.6	72.4	
19	Near Main Gate	68.6	68.9	70.3	70.8	70.6	71.6	
20	Near Material Gate	69.4	70.2	72.6	74.1	74.4	74.0	

D. Ground Water Quality: January'23

Sl. No.	Parameter	Limit as per IS 10500 :2012		Date of sampling: 24.01.2023	
		Acceptable Limit	Permissible limit	GW1	GW2
1	Colour, Hazen Units	5	15	<5	<5
2	Odour	Agreeable	Agreeable	Agreeable	Agreeable
3	pH	6.5 - 8.5	6.5 - 8.5	7.5	6.9
4	Turbidity, NTU	1	5	7.8	9.0
5	Total dissolve solid, mg/l	500	2000	217.4	128.4
6	Total Hardness (as $CaCO_3$), mg/l	200	600	118.2	97.1
7	Iron (as Fe), mg/l	1.0	1.0	0.8	0.4
8	Chloride (as Cl), mg/l	250	1000	34.0	25.8
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	59.2	34.8
12	Magnesium(as Mg), mg/l	30	100	16.2	24.3
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_4), mg/l	200	400	4.2	1.6
16	Nitrate (as NO_3), mg/l	45	45	2.8	0.8
17	Phenol (as C_6H_5OH), mg/l	0.001	0.002	< 0.002	< 0.002
18	Mercury,(as Hg), mg/l	0.001	0.001	<0.004	<0.004
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	<0.1	<0.1
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	< 0.02	<0.02
27	Mineral Oil, mg/l	0.5	0.5	< 0.2	< 0.2
28	Total Alkalinity(as $CaCO_3$), mg/l	200	600	132.7	114.5
29	Aluminium (as Al), mg/l	0.03	0.2	< 0.1	< 0.1
30	Boron (as B), mg/l	0.5	1.0	< 0.1	< 0.1
31	Nickel (as Ni), mg/l	0.02	0.02	<0.05	<0.05

32	Molybdenum (as Mo), mg/l	0.07	0.07	<0.1	<0.1
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

E. Treated Effluent Quality At Final Collection Point:

Table E_1:

Sl. No.	PARAMETER	Norm as per G.S.R. 422 (E)(Inland Surface water)	October-2022	November-2022
			Date of Sampling – 14.10.2022	Date of Sampling – 04.11.2022
1	Colour & Odour	Colourless & Odourless	5.2 & Agreeable	5.0 & Agreeable
2	Suspended Solid, mg/l	100	67.2	43.7
3	Total Dissolved Solids, mg/l	2100	1016.9	895.3
4	pH Value	5.5 to 9.0	7.54	7.2
5	Temperature, ^{0}C	Shall not exceed by + 5^{0}C	25.9	23.8
6	Oil & grease, mg/l	10	5.4	<5.0
7	Total Res. Chlorine, mg/l	1	ND	ND
8	BOD (3 days at 27^{0}C), mg/l	30	15.2	14.6
9	COD, mg/l	250	62.8	68.0
10	Hexavalent chromium (as Cr^{6+}), mg/l	0.1	0.02	<0.01
11	Cyanide (as CN), mg/l	0.2	<0.01	<0.02
12	Fluoride (as F), mg/l	2	1.0	1.1
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	1.4	1.2
16	Nitrate Nitrogen, mg/l	10	5.8	6.0
17	Dissolved Phosphate, mg/l	5	0.4	0.6
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	0.1	0.01
21	Mercury, mg/l	0.01	<0.004	<0.004
22	Total Chromium, mg/l	2	0.2	0.3
23	Copper, mg/l	3	<0.05	<0.05
24	Nickel, mg/l	3	<0.05	<0.05
25	Manganese, mg/l	2	0.08	0.06
26	Vanadium, mg/l	0.2	<0.02	<0.02

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%

Table E_2:

Sl. No.	PARAMETER	Norm as per G.S.R. 422 (E)(Inland Surface water)	December - 2022	January -2023
			Date of Sampling – 14.12.2022	Date of Sampling – 23.01.2023
1	Colour & Odour	Colourless & Odourless	7.0 & Agreeable	5.6 & Agreeable
2	Suspended Solid, mg/l	100	58.3	62.2
3	Total Dissolved Solids, mg/l	2100	754.2	698.4
4	pH Value	5.5 to 9.0	7.5	7.2
5	Temperature, ^{0}C	Shall not exceed by + 5^{0}C	21.6	22.4
6	Oil & grease, mg/l	10	6.2	5.1
7	Total Res. Chlorine, mg/l	1	ND	ND
8	BOD (3 days at 27^{0}C), mg/l	30	16.2	14.8
9	COD, mg/l	250	64.0	68.2
10	Hexavalent chromium (as Cr^{6+}), 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	1.0	1.2
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	1.6	1.4
16	Nitrate Nitrogen, mg/l	10	4.8	5.6
17	Dissolved Phosphate, mg/l	5	0.8	1.0
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	0.08
21	Mercury, mg/l	0.01	<0.004	<0.004
22	Total Chromium, mg/l	2	0.2	0.24
23	Copper, mg/l	3	<0.05	<0.02
24	Nickel, mg/l	3	<0.05	<0.05
25	Manganese, mg/l	2	0.35	0.15
26	Vanadium, mg/l	0.2	<0.02	<0.02
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_3:

Sl. No.	PARAMETER	Norm as per G.S.R. 422 (E)(Inland Surface water)	February - 2023	March - 2023
			Date of Sampling – 23.02.2023	Date of Sampling – 18.03.2023
1	Colour & Odour	Colourless & Odourless	5.2 & Agreeable	6.2 & Agreeable
2	Suspended Solid, mg/l	100	69.4	76.8
3	Total Dissolved Solids, mg/l	2100	854.7	764.2
4	pH Value	5.5 to 9.0	7.6	7.4
5	Temperature, ^{0}C	Shall not exceed by + 5^{0}C	24.6	26.8
6	Oil & grease, mg/l	10	5.8	5.2
7	Total Res. Chlorine, mg/l	1	ND	ND
8	BOD (3 days at 27^{0}C), mg/l	30	12.8	13.6
9	COD, mg/l	250	54.6	58.6
10	Hexavalent chromium (as Cr^{6+}), 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	<1.0
14	Phenol (as C_6H_5OH), mg/l	1	<0.05	<0.05
15	Iron (as Fe), mg/l	3	1.6	1.4
16	Nitrate Nitrogen, mg/l	10	6.2	6.8
17	Dissolved Phosphate, mg/l	5	0.8	0.8
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	0.02
21	Mercury, mg/l	0.01	<0.004	<0.004
22	Total Chromium, mg/l	2	0.2	0.3
23	Copper, mg/l	3	<0.02	<0.02
24	Nickel, mg/l	3	<0.05	<0.05
25	Manganese, mg/l	2	0.02	0.02
26	Vanadium, mg/l	0.2	<0.02	<0.02
27	Selenium, mg/l	0.05	<0.001	<0.001
28	Bio-assay test	90% survival of fish after 96 hr. in 100% effluent	94%	92%

Appendix - B

Online Monitoring Report for the Period

October - 2022 to March-2023

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:

Location - Near Nursery

Sl. No.	Parameters	Monthly Average concentration						
		Oct'22	Nov'22	Dec'22	Jan'23	Feb'23	March'23	Permissible limits as per SPCB
1	PM_{10} (µg/m^3)	63.33	81.89	41.92	58.94	54.42	73.70	100(24 Hrs)
2	$PM_{2.5}$ (µg/m^3)	36.28	63.33	34.57	32.74	26.78	31.60	60 (24 Hrs)
3	SO_2 (µg/m^3)	23.10	23.32	24.21	24.89	26.17	30.85	80(24 Hrs)
4	NO_x(µg/m^3)	12.10	12.24	13.51	14.32	15.10	17.57	80(24 Hrs)
5	CO (µg/m^3)	1.23	1.40	1.52	1.56	1.40	1.47	02 (08 Hrs)

Location - Near Security Barrack

Sl. No.	Parameters	Monthly Average concentration						
		Oct'22	Nov'22	Dec'22	Jan'23	Feb'23	March'23	Permissible limits as per SPCB
1	PM_{10} (µg/m^3)	84.78	63.60	75.25	42.26	67.48	77.86	100(24 Hrs)
2	$PM_{2.5}$ (µg/m^3)	48.97	55.75	32.56	37.55	30.51	27.54	60 (24 Hrs)
3	SO_2 (µg/m^3)	40.60	42.73	44.01	43.93	43.28	43.57	80(24 Hrs)
4	NO_x(µg/m^3)	28.42	24.61	30.27	28.12	29.15	25.75	80(24 Hrs)
5	CO (µg/m^3)	0.26	0.45	0.51	0.52	0.44	0.40	02 (08 Hrs)

Location - Near CPP

Sl. No.	Parameters	Monthly Average concentration						
		Oct'22	Nov'22	Dec'22	Jan'23	Feb'23	March'23	Permissible limits as per SPCB
1	PM_{10} (µg/m^3)	81.62	96.13	50.93	43.05	52.63	67.08	100(24 Hrs)
2	$PM_{2.5}$ (µg/m^3)	29.93	56.90	35.21	23.81	18.19	24.22	60 (24 Hrs)
3	SO_2 (µg/m^3)	39.95	41.11	44.01	43.85	49.60	46.85	80(24 Hrs)
4	NO_x(µg/m^3)	45.34	39.26	39.10	34.85	25.66	21.96	80(24 Hrs)
5	CO (µg/m^3)	0.65	0.77	0.92	0.95	0.77	0.81	02 (08 Hrs)

Location - Near Tata Corner

Sl. No.	Parameters	Monthly Average concentration						
		Oct'22	Nov'22	Dec'22	Jan'23	Feb'23	March'23	Permissible limits as per SPCB
1	PM_{10} (µg/m^3)	69.95	64.32	36.51	34.65	29.07	38.07	100(24 Hrs)
2	$PM_{2.5}$ (µg/m^3)	34.09	42.59	32.25	19.54	8.92	13.93	60 (24 Hrs)
3	SO_2 (µg/m^3)	36.31	36.59	37.64	38.62	39.60	39.85	80(24 Hrs)
4	NO_x(µg/m^3)	17.36	10.44	10.60	11.03	11.06	11.04	80(24 Hrs)
5	CO (µg/m^3)	0.29	0.46	0.56	0.61	0.46	0.45	02 (08 Hrs)

B. Continuous Emission Monitoring System (CEMS) report:

Sl. No.	Sampling Stations	Parameters	Monthly Average Concentration of PM, SO_2 & NO_x (mg/Nm^3)						
			Oct'22	Nov'22	Dec'22	Jan'23	Feb'23	March'23	Permissible limits as per SPCB
1	FAP (SAF – 3)	PM	20.04	33.22	34.15	39.81	65.03	28.23	**100**
2	FAP (SAF – 4 & 5)	PM	74.92	72.58	69.66	25.44	20.97	21.33	
3	SMS (EAF Furnace Stack)	PM	18.69	22.78	26.56	28.70	28.00	29.20	
4	SMS (AOD Furnace Stack)	PM	18.56	15.87	17.35	22.04	24.40	22.01	
5	CPP- 1	PM	41.54	37.77	37.22	41.27	47.54	47.33	**50**
		SO_2	224.09	224.11	228.25	218.05	220.83	227.67	**600**
		NOx	81.53	82.50	83.07	83.92	83.44	82.64	**300**
6	CPP - 2	PM	36.77	40.50	37.42	40.78	46.71	46.63	**50**
		SO_2	224.29	223.20	222.94	228.16	227.66	227.85	**600**
		NOx	95.18	94.86	94.78	96.33	96.18	96.22	**300**

C. Effluent Quality Monitoring System (EQMS) report:

Location: CRM ETP outlet

Sl. No.	Parameters	Monthly Average concentration						
		Oct'22	Nov'22	Dec'22	Jan'23	Feb'23	March'23	Permissible limits as per SPCB
1	**TSS**	16.95	16.87	17.02	18.62	18.30	19.71	**0 - 100.0 mg**
2	**pH**	7.24	7.42	7.49	8.12	7.75	7.42	**5.5 - 9.0 pH**
3	**BOD**	1.98	1.59	1.37	1.34	1.00	1.04	**0 - 30.0 mg/l**
4	**COD**	9.9	7.97	6.84	6.07	5.02	5.18	**0 - 250.0 mg/l**