

JSL/JRD/ENV/2024-25/29

Date: 29.11.2024

To

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

**Sub: Half Yearly Compliance Report of Environment Clearance for the period from April, 2024 to September, 2024.**

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

Dear Sir,

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

The soft copy of the same has also been sent to email –id [roez.bsr-mef@nic.in](mailto:roez.bsr-mef@nic.in).

Thanking You,

Yours faithfully,

For Jindal Stainless Limited

*Maitreyee Deb*  
**Maitreyee Deb**  
Head-Environment

Enc: As Above

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



Jindal Stainless Limited

**Jajpur Unit** : Kalinga Nagar Industrial Complex, Duburi, Distt. Jajpur - 755 026 (Odisha) India. **CIN**: L26922HR1980PLC010901  
**Corporate Office** : Jindal Centre, 12, Bhikaji Cama Place, New Delhi - 110 066, India. **Registered Office** : O.P. Jindal Marg, Hisar - 125 005. (Haryana) India  
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# JINDAL STAINLESS LIMITED



## HALF YEARLY EC COMPLIANCE REPORT

APRIL, 2024 TO SEPTEMBER, 2024

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

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

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

**A. Specific conditions:**

Sl. No.	Condition	Compliance Status
i.	Three tier Green Belt shall be developed in a time frame of one year covering 35% of total area (as committed by PP) with native species all along the periphery of the project site of adequate width and tree density shall not be less than 2500 per ha. Survival rate of green belt developed shall be monitored on periodic basis to ensure that damaged plants are replaced with new plants in the subsequent years. Compliance status in this regard, shall be submitted to concern Regional Office of the MoEF&CC.	<ul style="list-style-type: none"> <li>JSL has planted 2,81,804 nos. of trees with native species till date inside the plant premises with three tier design.</li> <li>Survival rate of plants are being monitored and 3345 nos. damage plants have been replaced to maintain the tree density as per the requirement.</li> </ul>
ii.	Greening and Paving shall be implemented in the plant area to arrest soil erosion and dust pollution from exposed soil surface.	All the vacant areas adjacent plant operation is either covered with green grass or paved paved through concreting or paver block.
iii.	41,784 m <sup>3</sup> /day of water requirement after the proposed expansion shall be met from Brahmani River and by Internal recycling after prior approval of the Competent Authority. No ground water abstraction is permitted.	<ul style="list-style-type: none"> <li>The present water consumption of JSL is in average 25,261 m<sup>3</sup>/day in FY 24-25.</li> <li>Treated water from RO installed at CPP is being reused as cooling tower makeup.</li> <li>No ground water is being used.</li> </ul>
iv.	Cold Rolling Mill shall have its independent ETP. Hazardous waste generated in CRM shall be sent to TSDF	<ul style="list-style-type: none"> <li>Two nos. of ETPs of capacity 750m<sup>3</sup>/day and 1560m<sup>3</sup>/day have been installed for treatment of effluent water generated from</li> </ul>

Sl. No.	Condition	Compliance Status
	and oily waste shall be sent to registered recyclers. Acid Recovery Plant shall be provided in CRM.	<p>both the existing and new CRM.</p> <ul style="list-style-type: none"> <li>ETP sludge generated in CRM ETP is being partially reused for making of Briquette which is subsequently used Ferro Alloy making and the rest is being sent to SPCB approved CHWTSDF site of M/s Re Sustainability Limited, Sukinda,</li> <li>Two nos. of Acid recovery plants have been installed for both existing and new CRM unit.</li> </ul>
v.	Covered sheds and toe walls shall be provided for raw material storage to check any attrition of raw materials. Storage sheds shall have garland drains, material traps and shall be built on concrete platforms.	<ul style="list-style-type: none"> <li>The raw materials like coal, chrome ore are kept on Concrete flooring and covered by tarpaulin.</li> <li>Toe walls, garland drains and settling pits have been made to control material loss.</li> </ul>
vi.	Top Recovery Turbine, Dry Gas Cleaning and Stove gas waste heat recovery systems shall be installed in BF.	Top recovery Turbine, Dry Gas Cleaning and stove waste gas recovery will be installed along with Blast Furnace under JSL Ferrous Limited against the EC condition is issued to JSL Ferrous Limited, vide letter No. J-11011/2811/2007-IA-II(I), dated: 16.06.2023.
vii.	Sinter Plant shall be equipped with Sinter cooler waste recovery system and suitable technology for control of dioxins and furans emissions from the plant	Sinter Plant hot gas heat recovery system will be installed under the EC issued to JSL Ferrous Limited, vide letter No. J-11011/2811/2007-IA-II(I), dated: 16.06.2023
viii.	TCLP analysis of the AOD slag shall be carried out periodically. In case of presence of hazardous material, the same shall be sent to TSDF. In case of non-hazardous material, AOD slag shall	TCLP analysis of AOD slag is being carried out yearly. Last TCLP analysis of AOD slag has been done in July 2023. From the periodical analysis, it was seen that AOD slag does not contain any hazardous material prescribed in schedule -2 of

Sl. No.	Condition	Compliance Status
	be utilized at project site for brick manufacturing and construction work after the recovery of metal.	Hazardous and other waste management rule 2016 as amended. The slag after metal recovery is being used as low laying area filling and with construction of ongoing projects and road construction at NHAI.
ix.	The Oil scum and oily waste from CRM shall be sent to registered recyclers	Oily scum generated from CRM is being sent to authorized recyclers. Yearly return for the same is being submitted to State Pollution Control Board yearly.
x.	<p>Following additional arrangements to control fugitive dust shall be provided:</p> <p>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.</p> <p>b. Proper covered vehicle shall be used while transport of materials.</p> <p>c. Wheel washing mechanism shall be provided in entry and exit gates with complete recirculation system.</p>	<p>To control the fugitive dust emission from different vulnerable sources following measures have been taken</p> <p>a. Dry fog systems have been installed at conveyors' discharge points and gun sprinklers has also been installed at raw material storage yard to control fugitive emission. Portable mist cannon have been provided to control dust in fly ash loading area.</p> <p>b. All the raw materials are transporting through rail and covered vehicles are provided during transportation road.</p> <p>c. Wheel washing system with complete water recirculation has been installed near ash loading area.</p>
xi.	All internal road and connecting road from project site to main highway shall be developed and maintained with suitable Million Axle Standard (MSA) as per the traffic load due to existing and proposed project.	All the internal roads and connecting road from project site to main highway are made with RCC/paver block.
xii.	Performance test shall be conducted on all pollution control systems every year	NIT Rourkela has been completed the performance test of all pollution control devices. On receipt of

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

**B. General Condition**

Sl. No.	Condition	Compliance Status
<b>I. Statutory Compliance</b>		
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.	All applicable acts/rules/subordinate legislation is being followed during operation.
<b>II. Air quality monitoring and preservation</b>		
i.	24x7 continuous emission monitoring system at process stacks to monitor stack emission as well as four Continuous Ambient Air Quality Station (CAAQS) for monitoring AAQ parameters with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time. The CEMS and CAAQMS shall be connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.	<p>All process stacks are equipped with 24x7 Continuous Emission Monitoring System which are directly connected to CPCB and OSPCB server.</p> <p>Four numbers of continuous on-line ambient air quality monitoring systems (CAAQMS) have been installed in consultation with SPCB and the data is continuously transmitted to both SPCB &amp; CPCB server.</p> <p>To maintain reliability and accuracy of the analyzer, periodical calibration is being performed.</p>

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



viii.	Design the ventilation system for adequate air changes as per prevailing norms for all tunnels, motor houses, Oil Cellars.	All the ventilation system for adequate air changes has been designed as per design document for all tunnels, motor houses and shop floors.
<b>III. Water quality monitoring and preservation</b>		
i.	The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 (G.S.R 414 (E) dated 30th May 2008; G.S.R 277 (E) dated 31st March 2012 (applicable to IF/EAF); S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.	Continuous Effluent Monitoring System has been installed at both the ETP of Cold Rolling Mill for monitoring of parameters like pH, TSS, BOD, COD, Fluoride and Cr <sup>+6</sup> and connected to SPCB/CPCB server.  Online analyzers installed in ETP are being calibrated periodically through NABL approved laboratory.
ii.	The project proponent shall monitor regularly ground water quality at least twice a year (pre- and post-monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognized under Environment (Protection) Act, 1986 and NABL accredited laboratories.	Ground water quality is being monitored in core zone & buffer zone twice in a year (pre- and post-monsoon) through NABL accredited laboratory. The last ground water monitoring report is enclosed as <b>Appendix – A</b> .
iii.	Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.	Two nos. of Sewage Treatment Plants of capacity 100 KLD & 35 KLD have been installed for treatment of domestic waste water. The treated water is being regularly analyzed by approved NABL accredited laboratory.
iv.	The project proponent shall provide the ETP for effluents of rolling mills to meet the standards prescribed in G.S.R 277 (E) 31 <sup>st</sup> March 2012 as amended from time	Two nos. of ETPs of capacity 750m <sup>3</sup> /day and 1560m <sup>3</sup> /day have been installed for treatment of effluent water generated from both the existing and

	to time.	new CRM.
v.	Garland drains and collection pits shall be provided for each stock pile to arrest the runoff in the event of heavy rains and to check the water pollution due to surface run off.	Garland drains and collection pits have been provided at raw material storage area to arrest the runoff in the event of heavy rains and to check the water pollution due to surface run off.
vi.	Tyre washing facilities shall be provided at the entrance/exit of the plant gates.	Wheel washing system with complete water recirculation system has been installed at Ash loading area.
<b>IV. Noise monitoring and prevention</b>		
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.	Ambient noise as well as work zone noise is being monitored monthly and is being submitted to Regional Officer of the Ministry as a part of six-monthly compliance report. <b>(Enclosed as Appendix-A)</b>
<b>V. Energy Conservation measures</b>		
i.	Energy Conservation measures may be adopted such as adoption of solar energy and provision of LED lights etc., to minimize the energy consumption.	<ul style="list-style-type: none"> <li>All work area and street lights are converted to LED lights at JSL premises.</li> <li>Floating solar project has been installed at water reservoir of JSL for generation of 7.3 MWp power and Roof top solar installed for 14.4 MWp as RE power.</li> </ul>
<b>VI. Waste Management</b>		
i.	Used refractories shall be recycled.	Used refractories generated from SMS partially are being recycled in the process itself and rest are sold to recycler.
ii.	Kitchen waste shall be composted or converted to biogas for further use.	An Organic Waste Converter of capacity 100 kg/day has been installed for conversion of kitchen waste to compost; the compost is used as fertilizer for greenbelt development.

<b>VII. Green Belt</b>		
i	The project proponent shall prepare GHG emissions inventory for the plant and shall submit the programme for reduction of the same including carbon sequestration including plantation.	GHG emission inventory for the plant has been prepared for baseline emission status on basis of which Decarbonization road map has been prepared. JSL has taken up various Decarbonization programs. The detail projects planned for reduction of GHG emissions is attached as <b>Annexure – II</b> .
ii	Project proponent shall submit a study report on De-carbonization program, which would essentially consist of company's carbon emissions, carbon budgeting/balancing, carbon sequestration activities and carbon capture, use and storage and offsetting strategies. Further, the report shall also contain time bound action plan to reduce its carbon intensity of its operations and supply chains, energy transition pathway from fossil fuels to Renewable energy etc. All these activities/ assessments should be measurable and monitor able with defined time frames.	JSL has on boarded Environmental Resources Management (ERM) for the Study on identifying De-carbonization Opportunity/projects & development of a comprehensive Decarbonization Roadmap.
<b>VIII. Public hearing and Human health issues</b>		
i	Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.	<ul style="list-style-type: none"> <li>Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) has been prepared and regular mock drill being conducted to verify effectiveness of the plan.</li> <li>All inputs for Disaster Management Plan has been provided to District Administration for preparation of Offsite Disaster management plan.</li> </ul>
ii	The project proponent shall carry out heat stress analysis for the workmen who work in high temperature work zone and	Heat stress analysis at high temperature work zone has been carried out by third party and Personal Protective Equipment (PPE) as per the norms of

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

		<p><b>Marurtikar:</b> Pond cleaning, goat rearing, sheep rearing, poultry, mushroom cultivation and other livelihood programmes through SHG.</p> <p><b>Khurunti:</b> ASMITA safety jacket production center and other livelihood programmes through SHG.</p>
ii	The company shall have a well laid down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.	The company has laid down dedicated Environmental Policy duly approved by Board of Directors and is committed to maintain proper checks & balances for integrating environment review and action. Copy of Environmental Policy is enclosed as <b>Annexure – III</b> .
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	JSL has a well-equipped Environment department with qualified and experienced officers led by a senior level executive as Head Environment who directly reports to the Site Head.
<b>X. Miscellaneous</b>		
i.	The project proponent shall make public the environmental clearance granted for their project along with the	<ul style="list-style-type: none"> <li>Advertisement on grant of Environment Clearance had been published in newspapers namely ORISSA POST (English) and PRAMEYA</li> </ul>

	<p>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.</p>	<p>(Odia) on 07.06.2022 respectively for EC granted on 01.06.2022.</p> <ul style="list-style-type: none"> <li>Advertisement on grant of Environment Clearance had been published in newspapers namely ORISSA POST &amp; The New Indian Express (English) and Dharitri &amp; Pragativadi (Odia) on 22.06.2023 respectively for EC granted on 16.06.2023.</li> <li>Environment Clearance is displayed on the website of the company permanently.</li> </ul>
ii.	<p>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.</p>	<ul style="list-style-type: none"> <li>The copies of the environmental clearance had been submitted to the Heads of local bodies, Panchayats on 09.06.2022 for EC granted on 01.06.2022.</li> <li>The copies of the environmental clearance have been submitted to the Heads of local bodies, Panchayats on 29.06.2023 for EC granted on 16.06.2023.</li> </ul>
iii.	<p>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.</p>	<ul style="list-style-type: none"> <li>Six-monthly reports on the status of the compliance of the stipulated environmental conditions uploaded on company website and being updated half-yearly basis.</li> </ul>
iv.	<p>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.</p>	<ul style="list-style-type: none"> <li>Both online and manual Stack Monitoring and ambient air quality monitoring are being carried out and related data are being displayed on the display board installed at main gate for public view.</li> <li>The Monitoring data along with half yearly EC compliance is being uploaded in the company website.</li> </ul>

v.	The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.	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	Environmental statement for each financial year in Form-V is being submitted to SPCB, Odisha with in stipulated timeline. The last report submitted on 30.09.2024 which is also display on company website.
vii.	The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.	The OSPCB, Odisha has issued “Consent to Operate” for starting operation of the plant which is valid till 31st March 2025.
viii.	The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.	The project proponent is continuously implementing and tracking all the commitment made in EIA/EMP report and commitment made in Public Hearing. Detailed status of which is enclosed as <b>Annexure- I</b> .
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).	All the future expansion will be routed through MoEF&CC in accordance with prevailing rules and guidelines.
x.	Concealing factual data or submission of false/fabricated data may result in revocation of this environmental	All the data/information submitted is factual and correct.

	clearance and attract action under the provisions of Environment (Protection) Act, 1986	
xi.	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.	The project proponent is implementing all the relevant conditions.
xii.	The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.	All the existing and any additional condition is being implemented on priority.
xiii.	The Regional Office of this Ministry shall monitor compliance 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.	All cooperation is being extended to Regional Officer for furnishing any data/information and monitoring reports.
xiv.	Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.	Any such appeal shall be routed through the NGT if required.



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

**A. Specific conditions**

Sl. no.	Condition	Compliance status
i.	The CER shall be completed within a time frame of three years.	Activities under CER are being undertaken in line with the commencement of the expansion project. Detailed report is enclosed as <b>Annexure – IV</b> .
ii.	Action plan for rainwater harvesting measures at plant site shall be submitted to the Regional office indicating quantity of rain water to be harvest from the roof tops and storm water drains to recharge the ground water and also to use for the various activities at the project site to conserve fresh water and reduce the water requirement from other sources.	<ul style="list-style-type: none"> <li>• Rain water harvesting for collection and utilization of rooftop water has been implemented at Store-2.</li> <li>• An earthen pit for collection of surface runoff collection has been constructed.</li> <li>• A detailed report on Rain Water Harvesting measures at plant site has already been submitted to Regional Office of MoEF&amp;CC, Bhubaneswar.</li> </ul>
iii.	The company shall establish separate environmental management cell for JSL & JCL respectively	Environment Management Cell has been established for JSL & JCL.
iv.	Greenbelt shall be in area of 40 ha. Outside the factory premises and the implementation status shall be reported to Regional Office of MoEF&CC.	Greenbelt has been developed in an area of 80 Acres outside plant premises.. Additional 20 Acres plantation is in progress.

**B. General condition**

Sl .No.	Condition	Compliance status
<b>I. Statutory compliance:</b>		
i.	The project proponent shall obtain Consent to Establish / Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State Pollution Control Board / Committee.	Consent to Establish issued by SPCB, Odisha vide SPCB Letter No. 3824/IND-II-CTE-6225, dated 21.03.2020 and amendment vide letter no. No. 10786/IND-II-CTE-6892, dated 07.07.2023.  Consent to Operate has been obtained vide SPCB letter no. 3882/IND-I-CON-5136, Dated 17.03.2023 and 5865/IND-I-CON-5136, Dated 19.04.2024 valid up to 31.03.2025.
ii.	The project proponent shall obtain the necessary permission from the Central Ground Water Authority, in case of drawl of ground water / from the competent authority concerned in case of drawl of surface water required for the project.	No ground water is being extracted. Water is being sourced from Bramhani river within the permissible water drawl capacity of water resource Deptt., Odisha.
iii.	The project proponent shall obtain authorization under the Hazardous and other Waste Management Rules, 2016 as amended from time to time.	The plant has already obtained authorization under Hazardous and other Waste Management Rules, 2016 and amended there-off for present facilities from SPCB, Odisha, which is valid till 31.03.2025.
<b>II. Air quality monitoring and preservation:</b>		
i.	The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R 277 (E) dated 31st March 2012 (applicable to IF/EAF) as amended from time to time; S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.	<ul style="list-style-type: none"> <li>All process stacks are equipped with 24x7 Continuous Emission Monitoring System which are directly connected to CPCB and OSPCB server.</li> <li>Four numbers of continuous on-line ambient air quality monitoring systems (CAAQMS) have been installed in consultation with SPCB and the data is continuously transmitted to both SPCB &amp; CPCB server.</li> </ul>

ii.	The project shall monitor fugitive emission in the plant premises at least once in every quarter through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.	Fugitive emission monitoring is being carried out on monthly basis through third party having NABL accreditation certification.
iii.	The project proponent shall install system carryout Continuous Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM <sub>10</sub> and PM <sub>2.5</sub> in reference to PM emission, and SO <sub>2</sub> and NO <sub>x</sub> in reference to SO <sub>2</sub> and NO <sub>x</sub> emissions) within and outside the plant area (at least four locations one within and three outside the plant area at an angle of 120° each), covering upwind and downwind directions.	<ul style="list-style-type: none"> <li>JSL has already installed 4 nos. of CAAQMS having parameter PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub> &amp; CO at strategic locations of JSL premises and data is being sent to SPCB/CPCB server.</li> </ul>
iv.	The camera shall be installed at suitable locations for 24x7 recording of battery emissions on the both sides of coke oven batteries and videos shall be preserved for at least one month recording.	Coke Oven Plant is operating under the entity of Jindal Coke Limited with a separate EC vide, vide letter No. IA–J–11011/111/2018–IA–II(I), dated: 25.05.2018. The related compliance has been shared separately by Jindal Coke Limited.
v.	Sampling facility at process stacks and quenching towers shall be provided as per CPCB guidelines for manual monitoring of stacks.	Coke Oven Plant is operating under the entity of Jindal Coke Limited with a separate EC vide, vide letter No. IA–J–11011/111/2018–IA–II(I), dated: 25.05.2018. The related compliance has been shared separately by Jindal Coke Limited.
vi.	The project proponent shall submit monthly summary report of continuous stack emission and air quality monitoring and results of manual stack monitoring and manual monitoring of air quality / fugitive emissions to Regional office of MoEF&CC, Zonal office of CPCB and regional office of SPCB along with six monthly monitoring report.	Manual monitoring of ambient air quality / stack monitoring is being carried out periodically. Manual Stack monitoring and ambient air quality monitoring data is annexed as <b>Appendix – A</b> . The monthly summary report of continuous stack emission and air quality monitoring data is annexed as <b>Appendix – B</b> .

vii.	Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust form all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.	Appropriate Air Pollution control devices like ESPs, Bag Filters, Dry Fog Systems have been provided to control stack emission and fugitive dust emission.
viii.	The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.	Mechanized bag cleaning facilities have been installed for better maintenance of bags.
ix.	Secondary emission control system shall be provided at SMS Converters.	Two nos. of pulse jet type bag filter having capacity of 11,56,000 M <sup>3</sup> /hr. each have been installed at the EAF & AOD furnaces for taking care of secondary emission.
x.	Pollution control system on the Steel Plant shall be provided as per the CREP Guidelines of CPCB.	All the pollution control equipment installed is as per CREP Guidelines of CPCB.
xi.	Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads, shop floors, roofs regularly.	6 nos. of mechanical sweepers engaged for road and shop floor cleaning.
xii.	Recycle and reuse iron ore fines, coal and coke fines, lime fines collected in the pollution control devices and vacuum cleaning devices in the process after briquetting / agglomeration.	The fines collected from processes of Ferro Alloy, Steel Melting Shop, Briquette Plant and Cold Rolling Mill has been used for Briquette making for further reuse for Ferro Alloy making.
xiii.	The project proponent shall use leak proof trucks / dumpers carrying coal and other raw materials and cover them with tarpaulin.	Raw materials are being transported through rail and covered vehicles to prevent spillage/dust generation.
xiv.	Wind Shelter fence and chemical spraying shall be provided on the raw material stock piles.	The raw material stock piles being kept under tarpaulin cover to mitigate fugitive emission in dry season. Spraying of chemical on coal heap has been taken up.
xv.	Design the ventilation system for adequate air changes as per ACGIH document for all tunnels, motor houses, Oil Cellars.	All the ventilation system for adequate air changes as per ACGIH document for all tunnels, motor houses and shop floors.

xvi.	The project proponent shall install Dry Gas Cleaning Plant with bag filters for SMS converter.	Two nos. of pulse jet type bag filter having capacity of 11,56,000 M <sup>3</sup> /hr each have been installed at the EAF & AOD furnaces for taking care of secondary emission.
<b>III. Water Quality Monitoring and Preservation</b>		
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.	<p>Continuous Effluent Monitoring System has been installed at both existing and new ETP of Cold Rolling Mill for monitoring of parameters like pH, TSS, BOD, COD, Fluoride and Cr<sup>+6</sup> and connected to SPCB/CPCB server.</p> <p>Thermal Power plant CT blow down is being recycled in the process through RO.</p> <p>To maintain reliability and accuracy of the analyzer, periodical calibration is being performed as per analysis report of NABL accredited laboratory. Analysis report of ETP is enclosed as <b>Appendix – A.</b></p>
ii.	The project proponent shall monitor regularly ground water quality at least twice a year (pre and post monsoon) at sufficient numbers of piezometers / sampling wells in the plant and adjacent areas through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.	The unit is monitoring ground water quality in core zone as well as in nearby areas by NABL accredited third party. Report is annexed as <b>Appendix – A.</b>
iii.	The project proponent shall submit monthly summary report of continuous effluent monitoring and results of manual effluent testing and manual monitoring of ground water to Regional office of MoEF &CC, Zonal office of CPCB and regional office of SPCB along with six monthly monitoring report.	Continuous Effluent monitoring system has been installed at ETP out let Cold Rolling Mill. The monthly summary report of continuous effluent monitoring data has been annexed as <b>Appendix – B.</b>
iv.	The project proponent shall provide the ETP to meet the standards prescribed in G.S.R. 277(E), dated 31st March 2012(Integrated Iron & Steel) as amended from time to time.	Two nos. of ETPs of capacity 750M <sup>3</sup> /day and 1560m <sup>3</sup> /day have been installed for treatment of process water generated from both the existing and new CRM to meet the prescribed standard dated 31 <sup>st</sup> March 2012.

v.	Adhere to “Zero Liquid Discharge”	The effluent is being treated and reused in different low-end applications. To use the treated water in high end application, Reverse Osmosis system project has been taken up.
vi.	Sewage Treatment Plant shall be provided for treatment of domestic waste water to meet the prescribed standards.	<ul style="list-style-type: none"> <li>• Two nos. of Sewage Treatment Plants having capacity 100 KLD &amp; 35 KLD have been installed inside plant premises for treatment of domestic waste water including one STP at Township.</li> <li>• The treated water from STP is being tested from NABL accredited third party to ensure its meets prescribed standard. Analysis report is enclosed as Appendix – A.</li> </ul>
vii.	Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run-off.	Garland drains and collection pits have been provided at raw material storage area to arrest the run-off in the event of rains.
viii.	Tyre washing facilities shall be provided at the entrance of the plant gates.	Wheel washing system with complete water recirculation system has been installed at Ash loading area.
ix.	CO <sub>2</sub> injection shall be provided in GCP of SMS to reduce pH in circulating water to ensure optimal recycling of treated water for converter gas cleaning.	The EAF system is designed for dry cleaning, so no water is being used in the system.
x.	The project proponent shall practice rain water harvesting to maximum possible extent.	<ul style="list-style-type: none"> <li>• A detailed study has been conducted for estimating rainwater harvesting potential in the entire complex.</li> <li>• An earthen pond of 10000 m<sup>3</sup> has been constructed for storage of rain water.</li> <li>• Rain water harvesting system has been constructed to harvest the rain water and reuse it for the plant activities.</li> </ul>

xi.	Water meters shall be provided at the inlet to all unit process in the steel plants.	Water meter has been provided at inlet of all process units.
xii.	The project proponent shall make efforts to minimize water consumption in the steel plant complex by segregation of used water, practicing cascade use and by recycling treated water.	<ul style="list-style-type: none"> <li>• The unit is making all necessary efforts to minimize water consumption in the steel plant complex by recycling and reuse of treated water.</li> <li>• The CPP cooling tower blow down water is being treated in RO plant and the treated water is being reused as cooling tower makeup water.</li> <li>• The process water generated from CRM is being treated in ETP and the treated water is being reused for SMS slag quenching, in Jigging plant, dust suppression and other low-end use.</li> </ul>
<b>IV. Noise monitoring and prevention</b>		
i.	Noise level shall be carried as per the prescribed guidelines and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six- monthly compliance report.	The monitoring of work zone noise level is being carried out periodically and the monitored data is being submitted to the Regional Officer of the Ministry along with six- monthly compliance report. The monitoring data for the period from Apr' 24 to Sep' 24 is annexed as <b>Appendix – A.</b>
ii.	The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time.	The monitoring of ambient noise level is being carried out periodically and the monitored data is being submitted to the Regional Officer of the Ministry along with six- monthly compliance report. The monitoring data for the period from Apr' 24 to Sep' 24 is annexed as <b>Appendix – A.</b>
<b>V. Energy Conservation Measures</b>		
i.	Waste Heat Recovery shall be provided in all units where the flue gas or process gas exceeds 300°C.	2 nos. Waste Heat Recovery Boilers of 2 x 28.5 TPH capacity have been installed at the 60 MVA Ferro Alloy Complex.

ii.	Explore feasibility to install WHRS at Waste Gases form BF Stoves; Sinter Machine; Sinter Cooler and all reheating furnaces and if feasible shall be installed.	Presently the unit is not having Blast Furnace and Sinter Plant.
iii.	Provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around the project area and maintain the same regularly.	Floating solar project has been installed at water reservoir of JSL for generation of 7.3 MW power as RE power. Installation of roof top solar panel for generation of 14.4 MWp power have been completed.
iv.	Provide LED lights in their office and residential areas.	LED lights are provided in all office, canteen, street.
v.	Ensure installation of regenerative type burners on all reheating furnaces.	Reheating furnace are not being used in JSL.
<b>VI. Waste Management</b>		
i.	Waste recycling plant shall be installed to recover scrap, metallic and flux for recycling to SMS.	Metal Recovery Plant has been setup for recovery of metal from Ferro & SMS slag and the recovered metal is being reused in the process.
ii.	Used refractories shall be recycled a far as possible.	Used refractories are generated from process are being reused in SMS as maximum as possible.
iii.	SMS slag after metal recovery in waste recycling facility shall be conditioned and used for road making, railway track ballast and other applications. The project proponent shall install a waste recycling facility to recover scrap, metallic and flux for recycle to Sinter Plant. The project proponent shall establish linkage for 100% reuse of rejects from Waste Recycling Plant.	Slag generated from SMS and Ferro Alloys is being processed at Metal Recovery Plant and the metal free slag is used for low lying area filling and road making of NH.
iv.	100% utilization of fly ash shall be assured. All the fly ash shall be provided to cement and brick manufactures for further utilization and Memorandum of Understanding in this regard shall be submitted to the Ministry's Regional Office.	Fly ash are utilized for Cement & Brick making / and to NH for road making.
v.	Oil Collection pits shall be provided in oil cellars to collect and reuse/recycle spilled oil. Oil collection trays shall be provided under coils on saddles in cold rolled coil storage area.	Oil Collection pits and Oil collection trays has been provided at oil cellar and under coils on saddles in cold rolled coil storage area to reuse/recycle spilled oil.



vi.	The waste oil, grease and other hazardous wastes like acidic sludge from pickling, galvanizing, chrome plating mills etc. shall be disposed as per the Hazardous & Other Waste (Management & Transboundary Movement) Rules, 2016.	<ul style="list-style-type: none"> <li>The waste oil is being disposed to authorized and registered recyclers</li> <li>CRM ETP sludge generated from plant is being sent to SPCB approved CHWTSD, Re Sustainability Limited at Sukinda.</li> </ul>
<b>VII. Green Belt</b>		
i.	Green belt shall be developed in an area equal to 33% of the plant area with a native tree species in accordance with CPCB guideline. The greenbelt shall inter alia cover the entire periphery of the plant.	<ul style="list-style-type: none"> <li>JSL has planted 2,81,804 nos. of trees with native species till date inside the plant premises with three tier design.</li> <li>Survival rate of plants are being monitored and 3345 nos. damage plants have been replaced to maintain the tree density as per the requirement.</li> </ul>
ii.	The project proponent shall prepare GHG emission inventory for the plant and shall submit the programme for reduction of the same including carbon sequestration including plantation.	GHG emission inventory for the plant has been prepared for baseline emission status on basis of which Decarbonization road map has been prepared. JSL has taken up various Decarbonization programs. The detail projects planned for reduction of GHG emissions is attached as <b>Annexure – II</b> .
<b>VIII. Public hearing and Human health issues</b>		
i.	Emergency Preparedness plan based on Hazard Identification and Risk Management (HIRA) and Disaster Management Plan shall be implemented.	<ul style="list-style-type: none"> <li>Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) has been prepared and regular mock drill being conducted for verifying effectiveness of the plan.</li> <li>Disaster Management Plan has been prepared in consultation with District Administration and has implemented for existing operation.</li> </ul>

ii.	The project proponent shall carryout heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protective Equipment (PPE) as per the norms of Factory Act.	Heat stress analysis at high temperature work zone has been carried out by third party and Personal Protective Equipment (PPE) as per the norms of Factory Act is being provided to the workman.
iii.	Provision shall be made for housing construction labor within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical healthcare, crèche etc. The housing may be in the form of temporary structures to be removed after completion of the project.	There is no provision of staying of construction labor within the plant site.
iv.	Occupation Health surveillance of the workers shall be done regular basis and records maintained as per the Factory Act.	Occupation Health surveillance of the workers is being carried out on periodical basis as per the Factory Act and records are being maintained.

**IX. Corporate Environment Responsibility**

i.	The project proponent shall comply with the provisions contained in this Ministry's OM vide F. No. 22-65/2017-IA.III dated 1st May 2018, as applicable, regarding Corporate Environment Responsibility.	The notification is superseded by MoEF & notification dated 30 <sup>th</sup> September 2020. The issues raised during public hearing is being reviewed, tracked and implemented.
ii.	The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements / deviation / violation of the environmental / forest / wildlife norms / conditions. The company shall have defined system for reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the Board Resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly compliance report.	The company has laid down dedicated Environmental Policy duly approved by Board of Directors and is committed to maintain proper checks & balances for integrating environment review and action. Copy of Environmental Policy is enclosed as <b>Annexure – III</b> .

iii.	A separate Environment Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior executive, who will directly to the head of the organization	JSL has a well-equipped Environment department with qualified and experienced officers led by a senior level executive as Head Environment who directly reports to the Site Head.
iv.	Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be dully approved by competent authorities. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry / Regional Office along with the six-monthly compliance report.	Action plan has been made for implementing EMP and environmental conditions applicable to JSL. Year wise funds are being allocated towards environment cost. Compliance of environmental conditions is being regularly submitted to RO, MoEF&CC on half yearly basis.
v.	Self –environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.	<ul style="list-style-type: none"> <li>• Self-environmental audit is being conducted regularly and any point observed is being discussed, reviewed and action plan made.</li> <li>• Third Party Environment Audit for the FY 2022-23 has been carried out and reports have been submitted to MoEF&amp;CC.</li> </ul>
vi.	All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the plants shall be implemented.	All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) are strictly followed.
<b>X. Miscellaneous</b>		

i.	The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising in at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.	The advertisement has been published in two newspapers namely ORISSA POST (English) and SURYAPRAVA (Odia) on 29.09.2019 & 01.10.2019 respectively. Copy of the same has been submitted to your good office on 14.10.2019.
ii.	The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the day of receipt.	Copies of the Environmental Clearance have been submitted to President Zilla parishad, Jajpur and Additional District Magistrate, Kalinga Nagar and District Magistrate, Jajpur. Copy of the same has been submitted to your good office on 14.10.2019.
iii.	The project proponent shall upload the status of compliance of the stipulated environmental clearance conditions including results of monitored data on their website and update the same on half-yearly basis.	Half Yearly EC compliance report has been uploaded at the Website of the Company.
iv.	The project proponent shall monitor the criteria pollutant level namely; PM10, SO2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.	<ul style="list-style-type: none"> <li>• Four numbers of continuous on-line ambient air quality monitoring systems (CAAQMS) have been installed in consultation with SPCB and the data is continuously transmitted to both SPCB &amp; CPCB server.</li> <li>• The monitoring data are also being displayed in electronic display board placed at Gate No. 1 of JSL for public view.</li> <li>• The monitored data is uploaded in company website along with Six monthly report and update the same periodically.</li> </ul>

v.	The project proponent shall submit six-monthly report on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environmental clearance portal.	Half Yearly EC compliance report is being submitted periodically to MoEF&CC, CPCB & SPCB and also been uploaded at the Website of the Company.
vi.	The project proponent shall submit the environmental statement for each financial year in Form-IV to the concern State Pollution Control Board under the Environment (Protection). Act 1986, as amended subsequently and put on the website of the company.	Environment Statement in Form – V is being submitted to SPCB, Odisha every year by 30 <sup>th</sup> September. The Last report has been submitted on 28.09.2023 and also uploaded on the company website.
vii.	<p>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.</p> <p>i. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.</p> <p>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.</p>	<p>The Project Has been completed and in operation Consent to Operate has been issued and renewed via letter no 3882/IND-I-CON-5136, Dated 17.03.2023 and 5865/IND-I-CON-5136, Dated 19.04.2024 valid up to 31.03.2025</p> <p>I. All the stipulations made by State Pollution Control Board are being complied with.</p> <p>II. Commitments made in EIA/EMP report and Public hearing report are being reviewed, tracked and implemented. <b>Details are enclosed as Annex- I &amp; IV.</b></p>
viii.	No further expansion or modifications in the plant shall be carried out prior approval of the Ministry of Environment, Forest and Climate Change (MoEF&CC).	Any further expansion of the project will be routed in accordance with the MoEF&CC's relevant guidelines.
ix.	Concealing factual data or submission of false/fabricated data may result revocation of this environmental clearance and attract action under the provision of Environment (Protection). Act 1986.	All the data/information submitted is factual and correct.

x.	The Ministry may revoke or suspended the clearance, if implementation of any of the above conditions is not satisfactory.	The project proponent is implementing all the relevant conditions
xi.	The Ministry reserves the right to stipulate additional conditions if found necessary. The company in a time bound manner shall implement these conditions.	All the existing and any additional condition is being implemented on priority.
xii.	The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities shall extend full co-operation to the officer(s) of the Regional office by furnishing the requisite data / information / monitoring reports.	All the cooperation is being extended to any statutory authorities by furnishing requisite data, information and monitoring reports.
xiii.	The above conditions shall be enforced, inter-alia under the provision of the Water (Prevention & Control of Pollution) Act, 1974, the AIR (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject Manner.	All statutory provisions under Air Act, Water Act, Hazardous waste management rule, Public liability insurance act shall be followed.
xiv.	Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under the Section 16 of the National Green Tribunal Act, 2010	Any such appeal shall be routed through the NGT if any.

**Status of compliance of environment clearance conditions of 1.6 MTPA integrated stainless steel plant (REF: J-11011/281/2007-IA-II (I), Dated. 17<sup>th</sup> 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.	<b>Noted.</b>
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.	<b>Noted.</b>
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.	<b>Noted.</b>
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.	<b>Noted.</b>
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.	<b>Noted</b>
6.	It was reported that remaining part of Integrated Stainless-Steel Plant of M/s. JSL,	<b>Noted.</b>

	excluding Coke Oven plant and Hot Strip Mill, is located in 318.02 ha of land lies within the given bounded coordinates.	
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.	<b>Noted</b>
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.	The required water quantity of 33,384 m3/day shall be met from River Brahmani as per EC granted vide letter No. F. No. J-11011/281/2007-IA. II(I), Dated. 16th June, 2023.
9.	The capital requirement of the Integrated Stainless-Steel Plant excluding Coke Oven plant and Hot Strip Plant was Rs. 6714 Cr. and the relevant budget Rs. 240 Cr. was earmarked for the environmental Protection measures as a capital.	The earmarked cost for environment protection is judiciously spent for air, water pollution control, solid waste management.
10.	The process inter alia includes receiving of raw materials namely Chrome ore, Coal, Lime, Dolomite at CRMHS area for further feed into plant process, feeding of chrome ore and other raw materials into Submerged Arc Furnace of Ferro Alloys Plant in the form of briquette to produce Ferro Alloy and Sending liquid Ferro Chrome metal to SMS for production of Crude Steel in the form of Slab. The hot rolled coils received from JUSL are further rolled in Cold Rolling Mill to get thinner grade of cold rolled products and processed to meet the requirement of the customers. Power requirement is met through existing 2x125 MW Captive Power Plant.	The key raw materials are chromite ore, steam coal and dolomite.
11.	Fly Ash generated from CPP is being 100% utilized by sending it to brick manufacturers and asbestos manufacturers. SMS slag and Ferro Alloys slag are being processed in Metal Recovery Plant/Jigging plant for metal	At present 100% utilization of fly ash is being carried by providing it to Cement Plant, Brick manufacturing/ and to NH for road making. SMS slag and Ferro Alloys slag are being



	<p>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.</p>	<p>processed in Metal Recovery Plant/Jigging plant for metal recovery. Residual slag is used in low lying area filling inside plant premises and road constriction.</p> <p>Furnace scale and Shot blaster dust from CRM, Bag filter duster and Caster dust from SMS are being reused in Briquette Plant.</p> <p>Bag filter dust from SAF of Ferro Alloy Plant are being reused 100% in briquette plant.</p> <p>Used oil and Waste oil are being sent to authorized recyclers</p>
12.	<p>No court case or violation under EIA Notification, 2006 to the project or related activity reported by project proponent.</p>	-
13.	<p>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.</p>	-
14.	<p>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.</p>	-

15.	Further, M/s Jindal Stainless Ltd (JSL) submitted the requisite documents vide letter dated 24 <sup>th</sup> March 2018 for transfer of Environmental Clearance, 'No Objection Certificate' from transferor, M/s JSL and Undertaking from transferee, M/s JCL on non- judicial stamp papers, Punjab and Haryana High Court Order dated 20 <sup>th</sup> October, 2015 and certificate of incorporation of M/s JCL as well as the same documents with respect to transfer of 1.6 MTPA of Hot strip mill to M/s Jindal United Steel Limited.	-
16.	The Ministry of Environment, Forest and Climate Change, based on the recommendations of the Expert Appraisal Committee (Industry-I), hereby decided to transfer the Environmental Clearance of Coke Oven Plant from M/s Jindal Stainless Ltd (parent company) to M/s Jindal Coke Ltd (new company) and Hot Strip Mill to M/s Jindal United Steel Ltd (new company) under clause 11 of EIA Notification, 2006 and subsequent amendments subject to strict compliance of the specific and general conditions stipulated in the Environmental Clearance dated 1st November 2007 and 30 November 2006.	-
17.	This amendment to the Environmental Clearance granted for Integrated Stainless Steel Plant vide F.No.J-11011/281/2007-IA.II(I) dated 1st November, 2007 should be read with the Environmental Clearance granted for captive thermal power plant vide No. J-13011/5/2006-IA.II(T) dated 30 November, 2006.	-
18.	M/s Jindal Stainless Ltd shall abide by all the commitments and recommendations made in the EIA/EMP report and that during presentation to the EAC; commitments made	Jindal Stainless is committed to comply all the recommendation made in EIA/EMP report and commitments made during public hearing.

	during the Public hearing held on 22.09.2005 for 4x125 MW Captive Power Plant and 30.06.2006 for Integrated Stainless-Steel Plant.	All the commitment made are being periodically reviewed, tracked and implemented.
19.	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.	All the conditions are being implemented /checked and maintained.
20.	The Ministry reserves the right to stipulate additional conditions if found necessary, The Company in a time bound manner shall implement these conditions.	All conditions including additional conditions if any are being complied, checked and maintained.
21.	The PP shall ensure no change in the pollution load and no conflict in sharing in common facilities in day to day operations.	The same is ensured.
22.	All the liabilities regarding environmental issues of Coke Oven Plant and Hot strip mill will also be the responsibility of M/s Jindal Stainless Ltd.	Noted.
23.	The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and rules.	All prevailing Acts and Rules are being complied are being complied which is being ensured through periodical review and monitoring.
24.	Any appeal against this Environmental Clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.	Any such appeal shall be routed through the NGT if any.

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

**A. SPECIFIC CONDITIONS:**

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

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

Sl. No.	Condition	Compliance
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.	<p>Fe-Cr slag is further processed in Jigging Plant and utilized for road construction &amp; low laying are filling inside the plant.</p> <p>SMS slag is being used in road and cement making.</p> <p>Flue gas residue from bag House and Mill Scale from CRM is being recycled in Ferro Alloys in the form of Briquettes.</p> <p>CRM ETP Sludge is partially used in briquette making and rest stored at designated place in concrete floor with covered shed and sent to Common Hazardous Waste Treatment, Storage and Facility (CHWTSDF), Re sustainability Ltd, at Jajpur as per guideline of SPCB, Odisha.</p>
vii.	Green belt shall be developed in 135 ha out of total 526.0 ha area within and around the plant premises as per the CPCB guidelines in consultation with DFO.	<ul style="list-style-type: none"> <li>JSL has planted 2,81,804 nos. of trees with native species till date inside the plant premises with three tier design.</li> <li>Survival rate of plants are being monitored and 3345 nos. damage plants have been replaced to maintain the tree density as per the requirement.</li> </ul>
viii.	As proposed, modified wet quenching for 1 <sup>st</sup> and 2 <sup>nd</sup> coke oven batteries as per CPCB guidelines and dry quenching in 3 <sup>rd</sup> and 4 <sup>th</sup> batteries shall be adopted during the expansion.	Dry quenching is proposed under separate EC in the name of M/s. Jindal Coke Limited, vide letter No. IA-J-11011/111/2018-IA-II(I) on Dated: 25.05.2018.

**B. GENERAL CONDITIONS:**

Sl. No.	Condition	Compliance
i.	The project authorities must strictly adhere to the stipulations made by the Orissa Pollution Control Board and the State	JSL is strictly adhering to all the stipulations made by SPCB and the State Government.

	Government.	
ii.	No further expansion or modifications in the plant should be carried out without prior approval of the MoEF.	Any further expansion or modification will be routed according to latest MoEF&CC guideline.
iii.	The gaseous emissions from various process units shall conform to the load/ mass-based standards notified by this Ministry on 19 <sup>th</sup> May, 1993 and standards prescribed from time to time. The state board may specify more stringent standards for the relevant parameters keeping in view the nature of the industry and its size and location. At no time, the emission level shall go beyond the prescribed standards. On line continuous monitoring system shall be installed in stacks to monitor SPM and interlocking facilities shall be provided so that process can be automatically stopped in case emission level exceeds the limit. NOx burners shall be installed to control NOx levels.	<p>The gaseous emissions from various process units are being monitored by NABL accredited Laboratory. The analysis reports are being submitted to SPCB and MOEF regularly. The gaseous emissions are conforming to the standards as per CTO issued by SPCB, Odisha.</p> <p>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.</p> <p>Different interlocking facilities like tripping on high hopper level / switching on DFDS are interlocked of load sensor of conveyors etc. has been installed.</p>
iv.	At least 4 ambient air quality monitoring stations shall be established in the downward direction as well as where maximum ground level concentration of SPM, SO <sub>2</sub> and NOx is anticipated in consultation with the OPCB. Data on ambient air quality and stack emission shall be regularly submitted to this Ministry including its Regional Office at BBSR/ OPCB/ CPCB once in six months.	4(four) nos. of AAQ monitoring stations have been installed inside the plant premises in consultation with SPCB, Odisha. Monitoring of Ambient Air is being carried out for PM <sub>10</sub> , PM <sub>2.5</sub> and other gaseous parameters. Monitoring data is being submitted to both SPCB and MOEF regularly. The manual monitoring data of both ambient air quality is annexed as <b>Appendix-A</b> .

<p>v.</p>	<p>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.</p>	<p>Fugitive emission is being controlled by installation of Dust suppression systems like DFS system and fixed type water sprinkler system at raw material handling areas, material transfer points of Ferro-alloys plants and CRMHS area to control fugitive emissions. Bag filters have been provided in Ferro-Alloys, SMS &amp; CRM units to control point source emission. Water sprinklers were installed at truck tippler area to take care of fugitive dust emission.</p> <p>Fixed type water sprinklers and Mobile Water sprinklers have been provided in plant areas to control fugitive emissions round the clock.</p>
<p>vi.</p>	<p>Industrial waste water shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19<sup>th</sup> May, 1993 and 31<sup>st</sup> December, 1993 or as amended from time to time. The waste water shall be utilized for plantation purpose.</p>	<p>Industrial waste water is treated to conform to prescribed standards and fully recycled / reused in the process and various in-house applications.</p> <p>Separate treatment facilities have been set-up at Cold Rolling Mill (CRM), Captive Power Plant (CPP) for treatment of waste water, Colling tower blowdown.</p>
<p>vii.</p>	<p>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.</p>	<p>Adequate measures have been taken to keep noise level within 85 dB(A) in and around plant area. Acoustic Enclosures are provided to control noises in DG, silencers are provided in vents.</p> <p>Noise monitoring result are enclosed as <b>Appendix-A.</b></p>
<p>viii.</p>	<p>The company shall develop surface water harvesting structures to harvest the rain water for utilization in the lean period</p>	<p>An earthen pond of capacity 10000m<sup>3</sup> has been made for storage of Rain water.</p>



	besides recharging the GW table.	
ix.	Occupational health surveillance of the workers shall be done on a regular basis and record maintained as per the Factories Act.	Occupational health surveillance of the workers is being carried out on a regular basis and records are being maintained as per the Factories Act.
x.	Recommendations made in the CREP guidelines issued for the steel plants shall be implemented.	CREP guidelines are being followed.
xi.	The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/ EMP report. Further the company shall undertake socio-economic development activities in the surrounding villages like community development programmes, educational programmes, drinking water supply and health care etc.	The project proponent is continuously implementing and tracking all the commitment made in EIA/EMP report and commitment made in Public Hearing. Detailed status of which is enclosed as <b>Annexure – I &amp; IV.</b>
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.	The earmarked fund for environment protection is being judiciously utilized in pollution control activities in field of Air, Water, waste management and green belt development.  A detailed break of spent expenditure is being submitted to OSPCB along with Environment Statement every year.
xiii.	The regional office of the Ministry at BBSR/ CPCB/ OPCB will monitor the stipulated conditions. A six-monthly compliance report and the monitored data along with statistical interpretation shall be submitted to them regularly.	Six monthly compliance report and monitored data is being submitted to the Ministry on six monthly basis.
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 <a href="http://envfor.nic.in">http/ envfor.nic.in</a> . This shall be advertised within seven days from the date of issue of the	Paper advertisement regarding grant of Environment Clearance had been publish in odia and English news paper.

	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.	
xv.	Project authorities shall inform the R.O. as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.	Consent to Operate has been obtained vide SPCB letter no. 3882/IND-I-CON-5136, Dated 17.03.2023 and 5865/IND-I-CON-5136, Dated 19.04.2024 valid up to 31.03.2025.
xvi.	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.	All the conditions are being implemented, reviewed and tracked periodically.
xvii.	The Ministry reserves the right to stipulate additional conditions if found necessary. The company in a time bound manner will implement these conditions.	All the conditions including additional conditions if any are being implemented, reviewed and tracked periodically.
xviii.	The above conditions will be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment Protection Act, 1986, hazardous Waste (Management & Handling) rules, 2003 and the Public Liability Act, 1991 along with their amendments and rules.	All the relevant acts, rules are being followed.

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

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

Sl. No.	Condition	Compliance
2	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	2X125 MW coal-based Power Plant have been installed and commissioned.  No ground water is being used for this project. The necessary approval for water drawl has already been obtained from IDCO.

	<p>proponent. In addition, another 100 ha of land is required for the ash pond. No ecologically sensitive area and no R &amp; 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.</p>	
3	<p>On the basis of the information submitted &amp; 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.</p>	-
i.	<p>The conditions stipulated by OSPCB vide their letter no. 1641/IND-II-NOC-3379 dated 30.01.06 shall be strictly implemented</p>	<p>All the conditions given by SPCB, Odisha in the NOC granted for the CPP, are being implemented.</p>
ii.	<p>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.</p>	<p>The land for interim ash pond is available. No forest clearance is involved.</p>

iii.	Total area of ash pond for the project shall not exceed 100 ha. The ash pond and the plant boundary shall be at least 500 m away from the railway line, highway and the flood plain of the Riverine system.	We have developed an Ash Pond inside the plant with provision of lining and other arrangements.
iv.	The ash pond was lined with clay on the other side embankment and with LDPE sheet on the bottom.	The ash pond made inside the plant is lined with LDPE sheets and the side embankment is lined with clay and bricks.
v.	Coal having not more than 45% ash and 0.5% sulphur content shall be used in the project. Copy of coal linkage shall be submitted within 3 months from the date of clearance.	The coal is sourced from Mahanadi Coal Field (MCF), Central Coal Field (CCL) & South Eastern Coal Field by road/rail.  The ash content of the feeding coal blend is being used in the range of 45 % with coal blending of imported coal and F Grade coal with Sulphur content below 0.5%.
vi.	Two bi-flue stacks of 150 m height each shall be provided with continuous online monitoring equipments. Exit velocity of 15.99 m/sec shall be maintained.	Bi-flue stacks having height of 150 m above the ground level has been installed.  On line monitoring instrument for Particulate Matter PM, SO <sub>2</sub> , NO <sub>x</sub> and Hg emissions have been installed with transmission of data to both SPCB & CPCB server.
vii.	Low NOx burner shall be provided.	Nox level in boiler is well with in the limit of CTO.
viii.	High efficiency ESP with efficiency not less than 99.9% shall be installed to ensure that SPM emission does not exceed 100 mg/Nm <sup>3</sup> .	Each Boiler has been provided with an ESP having two passes with 7 fields each. The ESP is designed to perform at an efficiency of 99.9% to control the particulate matter emission below 50 mg/Nm <sup>3</sup> .  The stack monitoring data is attached as <b>Appendix - A</b> .
ix.	Adequate dust extraction system such as bag filters and water spray system in coal and ash handling areas and transfer areas shall be provided.	Bag filters have been installed on top of the ash silos and telescopic chutes have been provided for unloading of fly ash. Dust conditioners have been installed under the silos to prevent fugitive dust.  Further, Dust suppression system has been installed at coal handling areas and transfer points.

x.	Ash generated shall be used in a phased manner as per provisions of the notification on Fly Ash Utilization issued by the Ministry in September, 1999 and its amendment. By the end of 9 <sup>th</sup> year full fly ash utilization shall be used.	Presently 100% of Fly Ash generated is being utilized by supplying to Cement plants, fly ash bricks/Asbestos manufacturing and NHA for road making.
xi.	Closed Cycle Cooling system with cooling towers shall be installed. COC of 6 shall be adopted.	Cooling tower circuit is of closed cycle where COC of more than 8 is being maintained. A reverse osmosis (RO) plant of 75m <sup>3</sup> /hr has been installed and commissioned to take care of the cooling tower blow - down water for process use.
xii.	Water requirement shall not exceed 2550 cum/hr. No ground water shall be extracted for use in the project. No discharge of waste water outside the project boundary shall be made. Zero discharge of effluents shall be adopted.	The water consumption of CPP is about 610 m <sup>3</sup> /hr. There is no ground water usage in CPP. No waste water is being discharged outside the plant boundary.  RO plant of 75 m <sup>3</sup> /hr has been installed and commissioned to take care of the cooling tower blow - down water for process use.
xiii.	Rain water harvesting shall be adopted in consultation with the Central Ground Water Authority/ Board. The plan for the same shall be submitted within a period of 3 months from the date of clearance.	Rain water harvesting system has been constructed to harvest the rain water and reuse it for the plant activities.
xiv.	Regular monitoring (quarterly) of ground water around ash dyke and the project area shall be undertaken and the data shall be analyzed to ascertain any change in the quality of water. Results shall be regularly submitted to the Ministry.	Regular monitoring of ground water is being carried out and the analyzed data is being submitted to SPCB & MOEFCC regularly.

<p>xv.</p>	<p>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.</p>	<p>The noise level in power plant is being monitored periodically. Noise prone equipment are acoustically enclosed like in DG set and Air Compressors are kept in enclosed room 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.</p> <p>The ambient noise and work zone noise data is enclosed as <b>Appendix – A.</b></p>
<p>xvi.</p>	<p>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.</p>	<p>Manual air quality monitoring is being done periodically. An online analyzer for ambient air quality monitoring has been installed in Captive Power Plant. The six-monthly monitoring data is attached as <b>Appendix - A.</b></p>
<p>xvii.</p>	<p>For controlling fugitive dust, regular sprinkling of water in vulnerable areas of the plant shall be ensured.</p>	<p>Sprinkling systems are being installed for combating fugitive dust. Water is being sprinkled on roads on regular basis by tankers for suppression of dust.</p> <p>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.</p> <p>Further, Rain guns have been provided in coal handling area to control the fugitive dust emission.</p>
<p>xviii.</p>	<p>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.</p>	<ul style="list-style-type: none"> <li>• JSL has planted 2,81,804 nos. of trees with native species till date inside the plant premises with three tier design.</li> <li>• Survival rate of plants are being monitored and 3345 nos. damage plants have been replaced to maintain the tree density as per the requirement.</li> </ul>

xix.	The project proponent shall advertise at least in two local newspapers widely circulated in the region around the project, one of which shall be in the vernacular language of the locality concerned, informing that the project has been accorded environmental Clearances and copies of clearance letter are available with the SPCB/committee and also at website of MOEFCC.	Paper advertisement regarding grant of Environment Clearance had been published in odia and English news paper.
xx.	A separate environmental monitoring cell with suitable qualified staff shall be set up for the implementation of the stipulated environmental safeguards.	An Environment management department with qualified professional lead by a senior leader has been established.
xxi.	Half yearly report on the status of implementation of the stipulated conditions and environmental safeguards shall be submitted to this Ministry/Regional office/CPCB/SPCB.	Half yearly report on the status of implementation of the stipulated conditions and environmental safeguards are being regularly submitted to MOEFCC/Regional office/CPCB/SPCB.
xxii.	Regional office of the MOEFCC located at Bhubaneswar will monitor the implementation of the stipulated conditions. A complete set of Environmental impact assessment Report and EMP along with additional information/clarification submitted to the ministry shall be forwarded to the Regional Office for their use during monitoring.	A complete set of Environmental impact assessment Report and EMP had been submitted to Regional office of the MOEFCC located at Bhubaneswar.
xxiii.	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.	Fund allocated for environment protection measure are spent for air, water, waste management and green belt development.  Yearly spent on environment protection measure is being submitted to OSPCB, Odisha along with Environment Statement which has been also uploaded in company website.
xxiv.	Full cooperation to the Scientists/ Officers from the Ministry/regional office/the CPCB/the SPCB who would be monitoring the compliance of environmental safeguards.	All the cooperation is being extended to any statutory authorities by furnishing requisite data, information and monitoring reports.

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



## CER Compliance Report – EC granted on 01.06.2022

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

Plantation activities in peripheral villages	Plantation drive at five numbers of village.	<p><b>Condition:</b> Village: Pankapal &amp; Dhabalgiri Actual area and number of trees to be decided based on survey and discussion with local authorities. Report will be sent to MoEF &amp; CC as a part of Half Yearly EC Compliance.</p> <p><b>Status:</b> Plantation activity is being carried out as per land allocation/availability. Based on land availability plantation has been carried out at Nuagaon</p>	<p><b>Condition:</b> Village: Jakhapura &amp; Jajpur Road Actual area and number of trees to be decided based survey and discussion with local authorities. Report will be sent to MoEF &amp; CC as a part of Half Yearly EC Compliance.</p> <p><b>Status:</b> Plantation carried out at Telibahali and Goshala of jajpur Road (Approx - 24400 Saplings planted) as per land allocation/availability.</p>	<p><b>Condition:</b> Village: Kharadi Actual area and number of trees to be decided based survey and discussion with local authorities. Report will be sent to MoEF &amp; CC as a part of Half Yearly EC Compliance.</p> <p><b>Status:</b> Completed</p>	40	82.56
<b>Medical Facilities</b>						
Provision of health care facilities	Establishment of 100 bedded super specialties hospital at village Jakhapura	<p><b>Condition:</b> Land acquisition process to be completed.</p>	<p><b>Condition:</b> Construction of Buildings and utilities.</p>	<p><b>Condition:</b> Provision of medical equipment, furniture and fixtures and essential medicines.</p>	2000	-
		<p><b>Status:</b> Identification of suitable land is under process</p>				
Medical assistance to cancer patients	Identification with assistance to cancer patients at village	<p><b>Condition:</b> Assistance will be provided on case to case and need basis.</p>			50	-

	Kumbhiragadia	<b>Status:</b> Organization is in touch with local villagers for identifying any such need at the village. Before 2022 organization had given financial support to cancer patient, but at present no further requirement has been identified where company can contribute.				
<b>Local Employment</b>						
Provide employment with preference to local people	Priority to be given for local employment during both construction and operation phase.	During Construction phase it is envisaged for Direct employment of 380 nos. and Indirect employment of 1800 no's & during operation phases direct employment of 715 nos. and Indirect employment of 1,525 no.  During construction phase 70 % indirect employment and 30 % direct employment will be through local employment. During operation phase 90 % indirect employment and 30 % direct employment will be through local employment.		Jindal Stainless has given 1479 nos. of direct employment and 7314 nos. of direct employments locally within the state till date.		
<b>Education</b>						
Establishment of educational facilities	Renovation/Construction of additional new 2nos. of classrooms and electrification with sanitation facility at four nos. school.	<b>Condition:</b> At village: Asanabahali, Mantira <b>Status:</b> Classroom of Mantira Sisu Mandir and Khandurai Temple at Asanabahali (As per villagers Request) have been completed.	<b>Condition:</b> At village: Kumbhiragadia <b>Status:</b> Homeopathy centre at kumbhir gadia completed	At village: Tikara  <b>Status:</b> Community Centre has been constructed at Tikar as per villager's request,	60	42
Establishment of technical education /coaching centers.	Establishment of skill development centre and financial assistance to coaching centre at 2nos. of villages.	<b>Condition:</b> At village: Trijanga. Establishment of skill development centre like tailoring, Financial assistance for four nos. of teachers to provided. <b>Status:</b> Computer training center	<b>Condition:</b> At village: Asanbahali Establishment of skill development centre like computer education, beauty parlor, electrical machineries. <b>Status:</b>	-	20	131.93

		has been established at Danagadi of Trijanga GP.	Tailoring training center was established at Asanbahali and about 60 nos. women and girls are trained.			
<b>Drinking Water facility</b>						
Provide drinking water to peripheral villages	Arrangement to be made in three numbers of villages.	<b>Condition:</b> At village Manpur: Set up of Pump house at the existing source and new pipeline laying of 1KM along with stand Post	<b>Condition:</b> At village Tikar: Set up of Pump house at the existing source and new pipeline laying of 1KM along with stand post.	<b>Condition:</b> At village Mantira Construction of 2Nos. of Bore well.	30	20
		<b>Status:</b> Completed at Manpur Patra sahi and Benga patia.				
<b>Women Empowerment</b>						
Strengthening of women empowerment measures in peripheral villages	Focus on various livelihood programme through Self Help Group (SHG) for women empowerment in peripheral villages.	<b>Condition:</b> Livelihood promotion through SHG that include dairy farming poultry, goatery, Phenyl making, Agarwati making, Wheat grinding at 30 nos. of villages in 7 GP of Danagadi block.  <b>Status:</b> Variou Livelihood programmes like Food processing, ASMITA Boutique, ASMITA Production center, Sahaja Sanitary Napkin, Tailoring Training Centres,	<b>Condition:</b> Establishment of sanitary napkin unit at Danagadi. Tailoring training at village Damdorpur, Kiapada and Dhabahali.  <b>Status:</b> A sanitary napkin manufacturing unit has been established at Dangadi.  Tailoring training centres are established at	<b>Condition:</b> Establishment of neem powder and turmeric powder making unit at Danagadi/Jakhapura Mushroom farming at Danagadi, Jakhapura.  <b>Status:</b> Turmeric making unit has been established at village Jakhapura.  Mushroom farming is being promoted and training on mushroom	300	105.90

		Boutique centers, Farm income generating activities such as dairy, goat rearing sheep rearing, poultry, mushroom cultivation are continued through SHG of Pankapal, Mantira, Kumbhiragadia, Jakhapura, Mangalpura, Dhuligarh and Trijanga GP of Danagadi block.	Kiapada, Dhabahali, and Damodarpur villages.	cultivation, mushrooms seeds etc. are distributed to farmers of Danagadi and Jakhpura villages.		
<b>Environment</b>						
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.	<p><b>Condition:</b> Effective pollution control equipments with interlocking facility with process to be in place for proposed expansion project. continuous emission monitoring, ambient air quality monitoring and effluent quality monitoring to be done. Periodical Ambient air quality monitoring to be done in buffer zone of plant site.</p> <p><b>Status:</b> Effective operation pollution control equipments are being ensured. Continuous emission monitoring systems, ambient air quality monitoring systems and effluent quality monitoring systems are installed. Periodical Ambient air quality monitoring is being carried out in buffer zone of plant site.</p>			As per EMP budget of plant	10008 (FY23-24)
Water sprinkling on roads to control air pollution	Extensive water sprinkling to be done in roads of peripheral villages	<p><b>Condition:</b> Regular water sprinkling to be done in villages at Jakhpura and Manpur.</p> <p><b>Status:</b> Regular water sprinkling is being carried out.</p>			20	7

**Details of Decarbonization Programme**

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

### CER compliance - 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)					
<b>Local Infrastructure Development Programme.</b>					The said work has been initiated by Local Municipality. However, JSL has participated in construction of road connecting from NH-16 to Dhamra Port.	<b>200</b>
Repairing of Damaged Roads in villages of Gardpur & Rachipur.	15	10	5	<b>30</b>		
Cleaning of Ponds in villages of <b>Gardpur and Marutikar.</b>	2	2	*	<b>4</b>	Pond cleaning work has been completed at Marutikar village.	<b>3</b>
Construction of a pond for bathing purposes in the village of <b>Mulasir.</b>	*	15	5	<b>20</b>	Construction of bathing pond could not be done due to non availability of land. Construction of bore well completed at village Jakhapura and Ragadi.	<b>7</b>
<b>Drinking water</b> * Provision of drinking water in villages of <b>Dhuligarh, Pankapal &amp; Mulasir</b>	50	*	*	<b>50</b>	Drinking water system with pipe line completed at Dhuligarh GP, Composite water supply done in Trijanga GP.	<b>50</b>
* Restoration of disconnected water supply in <b>Gardpur</b> village	10	*	*	<b>10</b>	Restoration work of disconnected water pipe line have been completed at village <b>Kantipur</b>	<b>8</b>
<b>Community Environmental Protection Programme</b> * In Villages of Gardpur, Dhuligarh, Khurunti, Rachilpur and Hardisahi	30	20	20	<b>70</b>	Third Party monitoring in buffer zone is being conducted periodically. However, a detailed comprehensive study on air and water quality has been conducted in 2020 as a part of EMP study.  In addition to this a massive plantation drive has been carried out at village Nuagaon.	<b>25</b>

<b>Education</b> Providing Tuition Teachers & Salary teachers for specific requirements of schools with special focus in villages of <b>Rachlipur, Ranagundi and Pankapal.</b>	15	10	10	<b>35</b>	Teacher with salary to the school and tuition teachers are provided in village Danagadi and Trijanga.	<b>15</b>
<b>Health</b> Support towards establishment of a medical centre in <b>Marutikar</b> in consultation with the local administration.	18	16	16	<b>50</b>	Set up of Homeopathy clinic work at Ollala is cancelled due land issue however in kumbhiragadia village the same is completed.	<b>8</b>
Strengthening Malaria Eradication programme in <b>Marutikar.</b>	15	10	5	<b>30</b>	Malaria Eradication programme completed at village Chingudipal and Nagada	<b>18</b>
Support towards strengthening of health facilities in villages of <b>Kacherigan</b> (Kidney ailment) and <b>Trijanga</b> (health of children residing in the R & R colony)	15	10	5	<b>30</b>	Support is being provided in strengthening of health facility by providing medicine and doctor with mobile van at 17 nos. of villages	<b>30</b>
Health Assessment study for cancer & diarrhea in <b>Kumbhuria</b> and Kidney ailments in <b>Kacherigan.</b>	60	*	*	<b>60</b>	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.	<b>18</b>
<b>Local Skill &amp; Vocational Training Programme</b> Provision of local skill development (Communication skills) in response to demand from a <b>Jakhapura</b> resident and ITI training for students in response to demand from <b>Garadihi</b>	50	40	30	<b>120</b>	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.	<b>60</b>
<b>Avenue/Urban Plantation in Buffer Zone</b> In <b>Gardpur, Dhuligarh, Khurunti, Rachilipur and Hadisahi</b>	20	10	10	<b>40</b>	Plantation carried out at Telibahali and Goshala of jajpur Road (Approx - 24400 Saplings planted)	<b>82.56</b>
<b>Total</b>				<b>549</b>		<b>524.56</b>



CER ACTIVITIES FROM NEEDS ASSESSMENT	YEAR 1	YEAR 2	YEAR 3	TOTAL	Status as on date	Amount Spent (Rs. In Lakh)
	(Rs. In Lakh)					
<b>Drinking Water</b>					Pipe line laying work with pump house and bore well with electrification has been completed at Manpur Patrasahi, Sulia and Kantipur village.	<b>38</b>
Pipeline, pump house and bore well with solar power at <b>Dankagadia Adivsi Sahi, Manatira Harijan Sahi and Village of Balungabandi and Dhapanki</b>	16	14	10	<b>40</b>	Pipe line laying work with pump house and bore well for water supply through Solar power system at Mantira Adivasi sahi.	<b>12</b>
Repair & Reinstallation of the Pump used by Villagers in <b>Kantipur</b>	5	*	*	<b>5</b>	Repair & Reinstallation of the Pump has been completed	<b>5</b>
<b>Health</b>						
Solid Waste Management in 22 Villages	25	25	20	<b>70</b>	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.	<b>25</b>
Support towards improvement in medical amenities in village of <b>Sarangpur, Godigotha and Ranagundi</b>	10	5	5	<b>20</b>	Support is being provided in strengthening of health facility by providing medicine and doctor with mobile van at 17 nos. of villages.	<b>20</b>
<b>Local Infrastructure Development programme</b>						
Electricity expenditure along with installation of transformer at <b>Brahman Sahi</b>	10	5	*	<b>15</b>	Electricity expenditure along with street light installation at Manpur road have been completed.	<b>10</b>
Renovation of community center used by local villagers, Media & Administration at <b>Sukinda Bhavan</b>	15	*	*	<b>15</b>	Renovation of community center used by local villagers, Media & Administration at Sukinda Bhavan have been completed.	<b>9</b>

* Renovation of community center used by local villagers, Media & Administration at Danagadi Bhavan	15	*	*	15	Renovation of community center used by local villagers, Media & Administration at Danagadi Bhavan has been completed.	9
					Construction of Nodal Up School Boundary Wall in Trijanga Village has been completed. Entrance gate and back side of kantipur colony gate coloring.	10
* Renovation of community Hall in <b>Mangobindapur</b>	10	*	*	10	Renovation of Mahila community center at Mangovindpur and Suanallo adibasi Sahi work is under progress. (1086 Sq Ft.)	14
* Construction of Shiva Temple in Kaitha Village	5	*	*	5	Construction of Shiva Temple in Kaitha Village has been completed ( Around 300 Sq Ft temple with around 400 sq ft sit up area.	9
<b>Local Skill &amp; Vocational Training</b>						
* Stainless Steel Skill Development at Government polytechnic, Ragadi, Jajpur	25	25	25	75	Stainless Steel Skill Development at Government polytechnic, Ragadi, Jajpur is regularly on going.	50
* Skill based training for youth groups in Dhuligarh & Kantipur	5	5	*	10	Skill based training like mobile repairing, electrical repairing and tailoring etc. for youth groups in Dhuligarh & Kantipur is on going.	8
<b>Total</b>				<b>280</b>		<b>219</b>



**JINDAL STAINLESS LIMITED**

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# **ENVIRONMENT POLICY**

**(Approved by the Board of Directors on May 15, 2024)**

**I. OBJECTIVE:**

Jindal Stainless Limited (hereinafter referred to as 'JSL'/'Company') is committed to be an Environmentally Responsible Organisation through minimising environmental impact of its operation & integrating environmental risk & opportunities into its strategic business decisions.

**II. PURPOSE:**

JSL will strive to:

- Foster an understanding of the material topics pertaining to environment and frame action plan to prioritise & manage related impacts.
- Strive for compliance or surpassing it with all relevant standards, legal obligations, and other requirements as part of our environmental policy.
- Promote sustainable use of natural resources, pollution prevention and reduction of emission, energy and waste generated from its operation.
- Adopt a strong governance culture which promotes periodical monitoring, review & public disclosure of our Environment Performance.
- Continually improve our environmental performance by nurturing innovation, awareness, and skill development among our employees and vendor partners.
- Adopt the best available technologies to control environmental impacts in the ecosystems and communities where we operate, thereby mitigating our footprint on both ecology and local communities.

The Policy will be periodically reviewed and updated as required. Any amendments to the Policy would be undertaken with the approval from the Board of Directors.

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Environment Monitoring Report (April, 2024 – September, 2024)

**A. Stack Analysis:**

**Particulate Matter (PM):**

Monitoring Results of Stack Analysis								
Sl. No.	Sampling Stations	Monthly Average Concentration of Particulate Matter (mg/Nm <sup>3</sup> )						Permissible limit
		Apr.-24	May-24	June-24	July-24	Aug. -24	Sept. -24	
1	FAP (SAF – 3)	21.8	32.6	23.8	19.1	36.6	65.5	<b>100</b>
2	FAP (SAF – 4 & 5)	46.2	43.4	34.4	42.5	54.3	40.7	
3	FAP (SAF – 4 & 5)-New	*	19.6	24.2	15.8	17.1	*	
4	FAP (SAF 4 & 5)– Tapping Fume	*	9.3	5.6	14.4	9.7	7.7	
5	Pellet Plant	28.8	26.2	28.3	29.6	28.6	26.6	<b>30</b>
6	SMS (EAF Furnace Stack)	20.4	20.1	30.8	13.8	18.2	19.4	<b>100</b>
7	SMS (AOD Furnace Stack)	39.8	36.5	34.6	40.4	25.7	28.2	
8	CRM (Shot Blaster Stack)	68.4	61.9	71.3	*	27.8	58.4	
9	CRM _Combo (Shot Blaster Stack)	*	*	*	29.6	17.5	16.8	<b>30</b>
10	CPP- 1	39.1	39.6	36.2	39.3	20.4	38.6	<b>50</b>
11	CPP - 2	39.6	45.7	46.8	43.6	SD	45.7	
12	CPP – 13 MW	-	-	-	-	32.6	35.6	

\* - Not in operation during monitoring

Environment Monitoring Report (April, 2024 – September, 2024)

**Sulphur Dioxide (SO<sub>2</sub>):**

Monitoring Results of Stack Analysis								
Sl. No.	Sampling Stations	Monthly Average Concentration of Particulate Matter (mg/Nm <sup>3</sup> )						Permissible limit
		Apr.-24	May-24	June-24	July-24	Aug. -24	Sept. -24	
1	CPP- 1	226.4	246.0	228.6	358.2	358.6	352.4	<b>600</b>
2	CPP - 2	268.2	254.1	239.4	382.1	SD	330.7	
3	CPP-13 MW	-	-	-	-	193.6	204.3	

\* - Not in operation during monitoring

**Oxide of Nitrogen (NO<sub>x</sub>):**

Monitoring Results of Stack Analysis								
Sl. No.	Sampling Stations	Monthly Average Concentration of Particulate Matter (mg/Nm <sup>3</sup> )						Permissible limit
		Apr.-24	May-24	June-24	July-24	Aug. -24	Sept. -24	
1	CPP- 1	104.2	133.8	119.7	218.2	209.7	218.7	<b>450</b>
2	CPP - 2	124.6	130.5	137.3	197.6	Shut Down	117.9	
3	CPP-13 MW	-	-	-	-	106.5	95.1	

Environment Monitoring Report (April, 2024 – September, 2024)

**B. Ambient Air Monitoring Report:**

**AAQ near Nursery**

Sl. No	Parameters	Monthly Average concentration						Permissible limit
		Apr.-24	May-24	June-24	July-24	Aug. - 24	Sept. - 24	
1	PM <sub>10</sub> µg/m <sup>3</sup>	73.6	75.8	69.8	76.4	84.4	82.2	100(24 Hrs)
2	PM <sub>2.5</sub> µg/m <sup>3</sup>	38.9	36.8	28.4	32.5	37.9	35.4	60 (24 Hrs)
3	SO <sub>2</sub> µg/m <sup>3</sup>	28.3	24.2	20.7	18.7	28.2	27.5	80(24 Hrs)
4	NO <sub>x</sub> µg/m <sup>3</sup>	20.9	19.6	15.4	15.5	18.3	17.8	80(24 Hrs)
5	CO mg/m <sup>3</sup>	0.69	0.72	0.55	0.62	0.82	0.78	2 (8 Hrs)
<b>NB:</b> 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						Permissible limit
		Apr.-24	May-24	June-24	July-24	Aug. - 24	Sept. - 24	
1	PM <sub>10</sub> µg/m <sup>3</sup>	89.6	92.4	80.3	84.4	93.4	90.6	100(24 Hrs)
2	PM <sub>2.5</sub> µg/m <sup>3</sup>	44.5	47.2	38.2	36.2	45.2	40.2	60 (24 Hrs)
3	SO <sub>2</sub> µg/m <sup>3</sup>	32.2	34.2	27.6	25.8	30.8	30.4	80(24 Hrs)
4	NO <sub>x</sub> µg/m <sup>3</sup>	24.0	26.4	21.8	20.1	20.2	19.6	80(24 Hrs)
5	CO mg/m <sup>3</sup>	0.75	0.87	0.77	0.88	0.95	0.92	2 (8 Hrs)
<b>NB:</b> 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						Permissible limit
		Apr.-24	May-24	June-24	July-24	Aug. - 24	Sept. - 24	
1	PM <sub>10</sub> µg/m <sup>3</sup>	80.2	84.4	78.8	82.0	88.1	85.5	100(24 Hrs)
2	PM <sub>2.5</sub> µg/m <sup>3</sup>	40.1	44.3	34.4	31.9	39.9	38.0	60 (24 Hrs)
3	SO <sub>2</sub> µg/m <sup>3</sup>	30.4	31.4	25.4	22.7	28.7	28.2	80(24 Hrs)
4	NO <sub>x</sub> µg/m <sup>3</sup>	21.2	24.8	19.8	19.4	18.6	18.2	80(24 Hrs)
5	CO mg/m <sup>3</sup>	0.72	0.94	0.79	0.90	0.92	0.88	2 (8 Hrs)
<b>NB:</b> Parameters such as Lead, Ozone, Ammonia, Benzene, Benzopyrene, Arsenic & Nickel found to be below detection limit (BDL).								

Environment Monitoring Report (April, 2024 – September, 2024)

**AAQ near Tata Corner**

Sl. No.	Parameters	Monthly Average concentration						Permissible limit
		Apr.-24	May-24	June-24	July-24	Aug. - 24	Sept. - 24	
1	PM <sub>10</sub> µg/m <sup>3</sup>	75.5	78.2	71.6	75.3	79.5	84.7	100(24 Hrs)
2	PM <sub>2.5</sub> µg/m <sup>3</sup>	35.7	39.4	30.2	29.4	34.8	36.8	60 (24 Hrs)
3	SO <sub>2</sub> µg/m <sup>3</sup>	26.4	27.4	22.1	20.1	25.3	26.1	80(24 Hrs)
4	NO <sub>x</sub> µg/m <sup>3</sup>	19.8	20.0	16.7	16.2	16.9	17.9	80(24 Hrs)
5	CO mg/m <sup>3</sup>	0.74	0.76	0.48	0.57	0.55	0.64	2 (8 Hrs)

**NB:** Parameters such as Lead, Ozone, Ammonia, Benzene, Benz o pyrene, Arsenic & Nickel found to be below detection limit (BDL).

**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						Permissible limit
		Apr.- 24	May- 24	June- 24	July- 24	Aug. - 24	Sept. -24	
<b>DAY TIME</b>								
1.	At Nursery	68.2	67.5	66.9	68.0	66.9	67.2	<b>75 dB(A)</b>
2.	At Security Barrack	72.4	71.8	69.4	70.0	69.4	70.2	
3.	At Rohit Gate	71.8	72.3	70.4	71.2	70.4	70.8	
4.	At Tata Corner	70.6	68.2	67.1	67.9	67.1	68.2	
<b>NIGHT TIME</b>								
1.	At Nursery	55.4	55.2	55.6	56.0	55.6	56.2	<b>70 dB(A)</b>
2.	At Security Barrack	57.1	58.2	57.6	56.2	57.6	57.4	
3.	At Rohit Gate	57.4	59.4	58.2	57.4	58.2	57.8	
4.	At Tata Corner	55.9	56.6	56.3	56.8	56.3	56.1	



Environment Monitoring Report (April, 2024 – September, 2024)

**b. Plant Area Noise Monitoring Data**

Noise Level Monitoring Results at Different Locations of the Plant								
Si no	Location	Monthly Average Noise Level ( Leq in dB(A) )						Permissible limit
		Apr.-24	May-24	June-24	July-24	Aug. -24	Sept.-24	
1	Near 60 MVA furnace	82.1	82.4	81.2	81.0	82.4	81.0	<b>85 dB(A)</b>
2	Near 27.6 MVA furnace	82.0	82.2	82.0	81.8	80.7	81.8	
3	Near Briquette plant office	80.6	80.3	80.1	80.6	80.9	80.4	
4	Near Jigging Plant - I	80.4	80.7	78.9	79.1	78.9	79.0	
5	Near Compressor Room	82.2	82.0	80.4	82.1	83.1	80.6	
6	Near 600KVA DG Set at 60 MVA Furnace area	80.6	--	--	--	--	--	
7	Near 600 KVA DG Set at 27.6 MVA Furnace area	80.0	--	--	--	--	--	
8	Near Pellet Plant control room	--	78.8	79.2	79.9	79.4	80.2	
9	Near Ferro Alloy Building	--	78.2	78.8	80.4	75.5	78.4	
10	Control Room (CPP)	77.1	77.5	78.6	77.2	76.4	78.9	
11	Near ESP (CPP)	82.4	82.6	81.7	80.0	82.8	81.9	
12	Near Cooling Tower(CPP)	82.1	81.6	82.0	79.9	80.6	82.1	
13	Near Boiler - 1 & 2 (CPP)	82.6	82	81.9	82.2	82.6	81.4	
14	T G Building (CPP)	82.2	82.8	81.3	81.7	83.3	81.6	
15	Compressor Room (CPP)	83.1	82.5	81.7	82.2	83	82	
16	Shot Bluster (CRM)	80.4	80.6	80.0	80.7	81.3	80.6	
17	Boiler Room (CRM)	80.6	80.9	80.8	81.0	80.4	80.2	
18	Compressor Room (CRM)	81.0	81.2	81.9	81.9	82.4	80.7	
19	HAPL Exit gate – I (CRM)	79.2	79.5	79.4	78.7	78.7	79.2	
20	Near EAF (SMS)	78.6	79.1	78.6	80.7	78.6	78.6	
21	Near AOD (SMS)	82.8	83.1	82.1	80.1	83.4	82.2	
22	Near Scrap Yard (SMS)	81.9	82.4	80.2	78.3	83.6	80.6	

Environment Monitoring Report (April, 2024 – September, 2024)

**D. Ground Water Quality: April'24**

Sl. No.	Parameter	Limit as per IS 10500 :2012		Date of sampling: 23.04.2024	
		Acceptable Limit	Permissible limit	GW1	GW2
1	Colour, Hazen Units	-	15	<5	<5
2	Odour	Agreeable	Agreeable	Agreeable	Agreeable
3	pH	6.5 - 8.5	6.5 - 8.5	7.2	7.3
4	Turbidity, NTU	1	5	<1.0	<1.0
5	Total dissolve solid, mg/l	500	2000	285.2	358.6
6	Total Hardness (as CaCO <sub>3</sub> ), mg/l	200	600	129.5	178.4
7	Iron (as Fe), mg/l	1.0	1.0	0.24	0.26
8	Chloride (as Cl), mg/l	250	1000	11.6	37.6
9	Residual Free Chlorine, mg/l	0.2	1.0	<0.1	<0.1
10	Fluoride (as F), mg/l	1.0	1.5	0.2	0.4
11	Calcium (as Ca), mg/l	75	200	58.1	72.2
12	Magnesium(as Mg), mg/l	30	100	14.3	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 <sub>4</sub> ), mg/l	200	400	19.4	59.6
16	Nitrate (as NO <sub>3</sub> ), mg/l	45	45	1.9	5.1
17	Phenol (as C <sub>6</sub> H <sub>5</sub> OH), mg/l	0.001	0.002	< 0.002	< 0.002
18	Mercury,(as Hg), mg/l	0.001	0.001	<0.001	<0.001
19	Cadmium (as Cd), mg/l	0.003	0.003	<0.01	<0.01
20	Selenium (as Se ), mg/l	0.01	0.01	< 0.001	< 0.001
21	Arsenic ( as As), mg/l	0.01	0.05	< 0.004	< 0.004
22	Cyanide (as CN), mg/l	0.05	0.05	<0.02	<0.02
23	Lead (as Pb), mg/l	0.01	0.01	<0.01	<0.01
24	Zinc (as Zn ), mg/l	5	15	<0.01	<0.01
25	Anionic Detergents (as MBAS), mg/l	0.2	1.0	<0.1	<0.1
26	Total Chromium (as Cr), mg/l	0.05	0.05	< 0.05	<0.05
27	Mineral Oil, mg/l	0.5	0.5	< 0.2	< 0.2
28	Total Alkalinity( as CaCO <sub>3</sub> ), mg/l	200	600	72.4	117.8
29	Aluminium (as Al ), mg/l	0.03	0.2	< 0.01	< 0.01
30	Boron (as B), mg/l	0.5	1.0	< 0.1	< 0.1
31	Nickel (as Ni), mg/l	0.02	0.02	<0.02	<0.02
32	Coliform Organisms, (MPN/100ml)	Nil	Nil	Absent	Absent
33	E Coli (MPN/100 ml)	Nil	Nil	Absent	Absent

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

Environment Monitoring Report (April, 2024 – September, 2024)

**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)	April-2024	May-2024
			Date of Sampling – 23.04.2024	Date of Sampling – 31.05.2024
1	Color	-	<5	<5
2	Suspended Solid, mg/l	100	53.4	48.7
3	Total Dissolved Solids, mg/l	2100	1276.9	1064.6
4	pH Value	5.5 to 9.0	7.46	7.55
5	Oil & grease, mg/l	10	5.8	4.2
6	Total Res. Chlorine, mg/l	1	ND	ND
7	BOD (3 days at 27°C), mg/l	30	12.8	12.4
8	COD, mg/l	250	64.4	58.8
9	Hexavalent chromium (as Cr <sup>6+</sup> ), mg/l	0.1	<0.01	<0.01
10	Cyanide (as CN), mg/l	0.2	<0.02	<0.02
11	Fluoride (as F), mg/l	2	1.2	1.1
12	Sulphide (as S) mg/l	2	<1.0	<1.0
13	Phenol (as C <sub>6</sub> H <sub>5</sub> OH), mg/l	1	<0.05	<0.05
14	Iron (as Fe), mg/l	3	1.4	1.2
15	Nitrate Nitrogen, mg/l	10	6.2	4.6
16	Dissolved Phosphate, mg/l	5	2.6	3.0
17	Arsenic, mg/l	0.2	< 0.004	< 0.004
18	Lead, mg/l	0.1	<0.01	<0.01
19	Zinc, mg/l	5	<0.01	<0.01
20	Mercury, mg/l	0.01	<0.004	<0.004
21	Total Chromium, mg/l	2	0.8	0.6
22	Copper, mg/l	3	<0.02	<0.02
23	Nickel, mg/l	3	<0.05	<0.05
24	Manganese, mg/l	2	<0.05	<0.05
25	Vanadium, mg/l	0.2	<0.2	<0.2
26	Selenium, mg/l	0.05	<0.001	<0.001
27	Free Ammonia, mg/l	5.0	<0.01	<0.01

Environment Monitoring Report (April, 2024 – September, 2024)

Table E-2:

Sl. No.	PARAMETER	Norm as per G.S.R. 422 (E)(Inland Surface water)	June -2024	July -2024
			Date of Sampling – 19.06.2024	Date of Sampling – 12.01.2024
1	Color	Hazen	<5	<5
2	Suspended Solid, mg/l	100	63.7	77.9
3	Total Dissolved Solids, mg/l	2100	1224.8	1024.6
4	pH Value	5.5 to 9.0	7.34	7.60
5	Oil & grease, mg/l	10	2.6	5.2
6	Total Res. Chlorine, mg/l	1	ND	ND
7	BOD (3 days at 27 <sup>0</sup> C), mg/l	30	14.4	12.2
8	COD, mg/l	250	72.8	64.4
9	Hexavalent chromium (as Cr <sup>6+</sup> ), mg/l	0.1	<0.01	<0.01
10	Cyanide (as CN), mg/l	0.2	<0.02	<0.02
11	Fluoride (as F), mg/l	2	1.2	1.0
12	Sulphide (as S) mg/l	2	<1.0	<1.0
13	Phenol (as C <sub>6</sub> H <sub>5</sub> OH), mg/l	1	<0.05	<0.05
14	Iron (as Fe), mg/l	3	1.4	1.6
15	Nitrate Nitrogen, mg/l	10	5.8	3.8
16	Dissolved Phosphate, mg/l	5	3.2	2.5
17	Arsenic, mg/l	0.2	< 0.004	< 0.004
18	Lead, mg/l	0.1	<0.01	<0.01
19	Zinc, mg/l	5	<0.01	<0.01
20	Mercury, mg/l	0.01	<0.004	<0.004
21	Total Chromium, mg/l	2	0.8	0.6
22	Copper, mg/l	3	<0.02	<0.02
23	Nickel, mg/l	3	<0.05	<0.05
24	Manganese, mg/l	2	<0.05	<0.05
25	Vanadium, mg/l	0.2	<0.2	<0.2
26	Selenium, mg/l	0.05	<0.001	<0.001
27	Free Ammonia, mg/l	5.0	<0.01	<0.01

Environment Monitoring Report (April, 2024 – September, 2024)

**Table E-3:**

Sl. No.	PARAMETER	Norm as per G.S.R. 422 (E)(Inland Surface water)	August - 2024	September - 2024
			Date of Sampling – 30.08.2024	Date of Sampling – 25.09.2023
1	Color	Hazen	<5	<5
2	Suspended Solid, mg/l	100	68.2	73.9
3	Total Dissolved Solids, mg/l	2100	875.1	743.3
4	pH Value	5.5 to 9.0	7.25	7.40
5	Oil & grease, mg/l	10	5.6	6.2
6	Total Res. Chlorine, mg/l	1	ND	ND
7	BOD (3 days at 27 <sup>0</sup> C), mg/l	30	14.4	10.8
8	COD, mg/l	250	62.8	48.4
9	Hexavalent chromium (as Cr <sup>6+</sup> ), mg/l	0.1	<0.01	<0.01
10	Cyanide (as CN), mg/l	0.2	<0.02	<0.02
11	Fluoride (as F), mg/l	2	1.4	1.2
12	Sulphide (as S) mg/l	2	<1.0	<1.0
13	Phenol (as C <sub>6</sub> H <sub>5</sub> OH), mg/l	1	<0.05	<0.05
14	Iron (as Fe), mg/l	3	1.8	1.1
15	Nitrate Nitrogen, mg/l	10	5.2	6.8
16	Dissolved Phosphate, mg/l	5	3.8	2.6
17	Arsenic, mg/l	0.2	< 0.004	< 0.004
18	Lead, mg/l	0.1	<0.01	<0.01
19	Zinc, mg/l	5	<0.01	<0.01
20	Mercury, mg/l	0.01	<0.004	<0.004
21	Total Chromium, mg/l	2	0.4	0.2
22	Copper, mg/l	3	<0.02	<0.02
23	Nickel, mg/l	3	<0.05	<0.05
24	Manganese, mg/l	2	<0.05	<0.05
25	Vanadium, mg/l	0.2	<0.2	<0.2
26	Selenium, mg/l	0.05	<0.001	<0.001
27	Free Ammonia, mg/l	5.0	<0.01	<0.01

Environment Monitoring Report (April, 2024 – September, 2024)

**F. Treated Effluent Quality at CRM ETP Outlet :**

Sl. No.	PARAMETER	Norm as per G.S.R. 422 (E)(Inland Surface water)	April-2024	August-2024	Sept.-2024
			Date of Sampling – 23.04.2024	Date of Sampling – 30.08.2024	Date of Sampling – 30.09.2024
1	Color	-	<5	<5	<5
2	Suspended Solid, mg/l	100	79.6	75.5	88.4
3	Total Dissolved Solids, mg/l	2100	1482.2	1813.4	841.7
4	pH Value	5.5 to 9.0	8.26	8.65	7.60
5	Oil & grease, mg/l	10	6.2	8.2	6.9
6	Total Res. Chlorine, mg/l	1	ND	ND	ND
7	BOD (3 days at 27°C), mg/l	30	14.6	10.8	12.0
8	COD, mg/l	250	72.8	52.2	54.4
9	Hexavalent chromium (as Cr <sup>6+</sup> ), mg/l	0.1	<0.01	<0.01	0.04
10	Cyanide (as CN), mg/l	0.2	<0.02	<0.02	<0.02
11	Fluoride (as F), mg/l	2	1.4	1.6	1.0
12	Sulphide (as S) mg/l	2	<1.0	<1.0	<1.0
13	Phenol (as C <sub>6</sub> H <sub>5</sub> OH), mg/l	1	<0.05	<0.05	<0.05
14	Iron (as Fe), mg/l	3	1.8	2.1	1.2
15	Nitrate Nitrogen, mg/l	10	5.4	6.4	6.2
16	Dissolved Phosphate, mg/l	5	3.2	3.7	1.8
17	Arsenic, mg/l	0.2	< 0.004	< 0.004	<0.004
18	Lead, mg/l	0.1	<0.01	<0.01	<0.01
19	Zinc, mg/l	5	<0.01	<0.01	<0.01
20	Mercury, mg/l	0.01	<0.004	<0.004	<0.004
21	Total Chromium, mg/l	2	1.2	0.8	1.1
22	Copper, mg/l	3	<0.02	<0.02	<0.02
23	Nickel, mg/l	3	<0.05	<0.05	<0.05
24	Manganese, mg/l	2	<0.05	<0.05	<0.05
25	Vanadium, mg/l	0.2	<0.2	<0.2	<0.2
26	Selenium, mg/l	0.05	<0.001	<0.001	<0.001
27	Free Ammonia, mg/l	5.0	<0.01	<0.01	<0.01

Environment Monitoring Report (April, 2024 – September, 2024)

**G. Fugitive Dust Emission:**

Monitoring Results of Fugitive Dust Emission								
Sl. No.	Sampling Stations	Concentration of Particulate Matter Below 10 micron as PM <sub>10</sub> (µg/m <sup>3</sup> )						Permissible limit
		Apr.-24	May-24	June-24	July-24	Aug. -24	Sept. -24	
1	Near 60 MVA furnace of FAP	982.3	826.8	795.8	788.2	901.6	876.0	-
2	Near 27.6 MVA furnace of FAP	894.7	882.3	804.8	779.6	810.0	847.0	
3	Near ESP of CPP	816.5	568.4	788.4	735.4	795.6	764.0	
4	Near Shot Blaster of CRM	758.4	698.4	764.3	782.9	725.4	790.0	
5	Near De-dusting area of SMS	811.8	768.2	746.1	725.7	812.3	805.0	<b>4000</b>
6	Near Crusher house of CRMHS	584.1	671.8	622.8	610.3	650.3	677.0	-
7	Near Pellet Plant ESP	--	--	---	-	845.3	804.0	
8	Near Briquette plant#1	--	--	--	--	722.7	762.0	

**H. Treated Sewage water quality:**

Sl. No.	Parameter	Standard as per Govt. of India, Ministry of Housing and Urban Affairs	Analysis Result
1	pH	6.5-8.5	6.6
2	Suspended Solid, mg/l	-	10.0
3	Oil & Grease, mg/l	10.0	5.2
4	Biochemical Oxygen Demand (3 days @27oC), mg/l	10.0	4.6
5	Chemical Oxygen Demand, mg/l	50.0	15.6
6	Total Nitrogen, mg/l	10.0	8.7
7	Residual Free Chlorine, mg/l	1.0	<0.1
8	Dissolved Phosphate, mg/l	5.0	0.42
9	Fecal Coliform, MPN/100ml	100.0	33.0

Online Environment Monitoring Report (April, 2024 – September, 2024)

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

**Location - Near Nursery**

Sl. No.	Parameters	Monthly Average concentration						Permissible limits as per SPCB
		April'24	May'24	Jun'24	July'24	Aug'24	Sept'24	
1	PM <sub>10</sub> (µg/m <sup>3</sup> )	74.24	50.74	53.80	33.86	42.88	59.28	100(24 Hrs)
2	PM <sub>2.5</sub> (µg/m <sup>3</sup> )	46.65	28.77	31.06	17.61	20.82	22.93	60 (24 Hrs)
3	SO <sub>2</sub> (µg/m <sup>3</sup> )	28.81	51.64	52.43	43.36	24.02	26.44	80(24 Hrs)
4	NO <sub>x</sub> (µg/m <sup>3</sup> )	20.87	29.27	18.63	15.66	15.53	15.42	80(24 Hrs)
5	CO (µg/m <sup>3</sup> )	0.69	0.53	0.46	0.45	0.43	0.28	02 (08 Hrs)

**Location - Near Security Barrack**

Sl. No.	Parameters	Monthly Average concentration						Permissible limits as per SPCB
		April'24	May'24	Jun'24	July'24	Aug'24	Sept'24	
1	PM <sub>10</sub> (µg/m <sup>3</sup> )	78.67	53.08	59.48	63.80	89.77	72.91	100(24 Hrs)
2	PM <sub>2.5</sub> (µg/m <sup>3</sup> )	51.96	18.01	27.21	38.65	35.76	18.07	60 (24 Hrs)
3	SO <sub>2</sub> (µg/m <sup>3</sup> )	28.44	23.59	21.77	23.17	22.53	22.08	80(24 Hrs)
4	NO <sub>x</sub> (µg/m <sup>3</sup> )	27.61	27.47	18.45	15.14	12.90	11.42	80(24 Hrs)
5	CO (µg/m <sup>3</sup> )	0.55	0.36	0.26	0.22	0.23	0.20	02 (08 Hrs)



Online Environment Monitoring Report (April, 2024 – September, 2024)

Location - Near CPP

Sl. No.	Parameters	Monthly Average concentration						Permissible limits as per SPCB
		April'24	May'24	Jun'24	July'24	Aug'24	Sept'24	
1	PM <sub>10</sub> (µg/m <sup>3</sup> )	57.91	48.64	61.22	46.10	45.56	67.66	100(24 Hrs)
2	PM <sub>2.5</sub> (µg/m <sup>3</sup> )	30.40	18.34	26.74	18.01	23.30	20.27	60 (24 Hrs)
3	SO <sub>2</sub> (µg/m <sup>3</sup> )	38.52	39.25	40.31	41.45	42.10	43.34	80(24 Hrs)
4	NO <sub>x</sub> (µg/m <sup>3</sup> )	21.65	21.63	23.62	22.53	21.74	21.64	80(24 Hrs)
5	CO (µg/m <sup>3</sup> )	0.62	0.58	0.51	0.42	0.40	0.55	02 (08 Hrs)

Location - Near Tata Corner

Sl. No.	Parameters	Monthly Average concentration						Permissible limits as per SPCB
		April'24	May'24	Jun'24	July'24	Aug'24	Sept'24	
1	PM <sub>10</sub> (µg/m <sup>3</sup> )	66.28	35.90	62.47	-	-	-	100(24 Hrs)
2	PM <sub>2.5</sub> (µg/m <sup>3</sup> )	33.00	14.37	14.36	11.36	17.75	23.26	60 (24 Hrs)
3	SO <sub>2</sub> (µg/m <sup>3</sup> )	39.96	38.83	39.47	40.09	41.03	42.62	80(24 Hrs)
4	NO <sub>x</sub> (µg/m <sup>3</sup> )	11.01	14.07	11.17	11.16	18.29	11.19	80(24 Hrs)
5	CO (µg/m <sup>3</sup> )	0.44	0.30	0.32	0.26	0.22	0.23	02 (08 Hrs)

Online Environment Monitoring Report (April, 2024 – September, 2024)

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

Sl. No.	Sampling Stations	Parameters	Monthly Average Concentration of PM, SO <sub>2</sub> & NO <sub>x</sub> (mg/Nm <sup>3</sup> )						Permissible limits as per SPCB
			April'24	May'24	Jun'24	July'24	Aug'24	Sept'24	
1	FAP (SAF - 3)	PM	12.65	26.26	23.10	26.92	16.92	57.01	<b>100</b>
2	FAP (SAF - 4 & 5)	PM	53.63	56.48	34.20	28.84	29.79	43.31	
3	SMS (EAF Furnace Stack)	PM	14.77	09.16	14.28	13.99	14.28	15.36	
4	SMS (AOD Furnace Stack)	PM	35.29	28.93	29.02	40.18	21.50	18.39	
5	CPP- 1	PM	38.0	37.70	37.56	33.44	36.40	28.19	<b>50</b>
		SO <sub>2</sub>	216.17	243.19	274.85	345.41	346.18	333.22	<b>600</b>
		NO <sub>x</sub>	83.78	116.30	139.46	156.76	199.61	182.71	<b>450</b>
6	CPP - 2	PM	32.54	38.66	47.75	32.64	SD	28.61	<b>50</b>
		SO <sub>2</sub>	255.88	263.42	260.64	242.92	SD	208.62	<b>600</b>
		NO <sub>x</sub>	97.79	106.21	126.00	100.11	SD	83.30	<b>450</b>
7	FAP (SAF - 4 & 5) New	PM	22.24	10.95	07.39	02.04	*	*	<b>100</b>
8	CRM Combo line Stack	PM	08.72	12.19	14.97	12.53	-	03.95	<b>30</b>
9	Pellet Plant Stack	PM	09.85	10.75	24.15	19.93	11.53	06.86	<b>30</b>
10	FAP (SAF - 4 & 5) Fume Extraction Stack	PM	05.78	06.83	06.84	10.28	08.43	07.76	<b>100</b>

NB: \* - Analyser under maintenance.