



JCL/JRD/ENV/2022-23/06

Date: 29.05.2023

To

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

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

- Ref: 1.** Environment Clearance vide Letter No. IA-J-11011/111/2018-IA-II(I), dated 9th May 2022 for Expansion of Coke production from 0.425 MTPA to 0.78 MTPA by installation of a new Stamp charged by-product recovery type Coke Oven Battery.
2. Environment Clearance vide Letter No. IA-J-11011/111/2018-IA-II(I), dated 25.05.2018 for 0.425 MTPA Coke Oven Battery (Recovery Type).

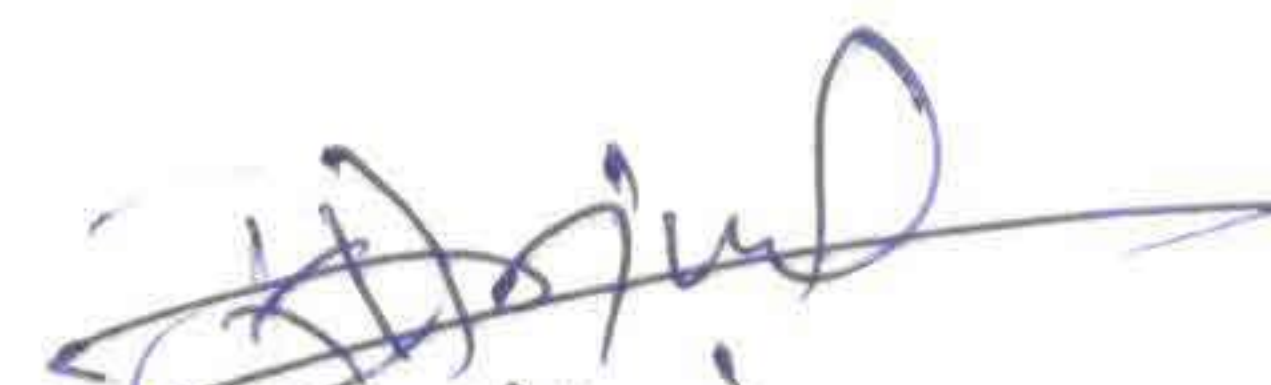
Dear Sir,

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

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

Thanking You,

Yours faithfully,
For Jindal Coke Limited


Deepak Agiwal
Head - COBP

Enc: As Above

CC:

1. The Director, Industry – I, MOEF&CC, Indira Paryavaran, Jor Bagh Road, Aliganj, New Delhi – 110003.
2. The In-Charge, Central Pollution Control Board, 502, Southernd Conclave 1582, Rajdanga Main Road, Kolkata – 700017.
3. The Member Secretary, State Pollution Control Board, Odisha, A/118, Nilakantha Nagar, Unit – VIII, Bhubaneswar – 751012.



Jindal Coke Limited

CIN: U23101HR2014PLC053884

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M/S. JINDAL COKE LIMITED



HALF YEARLY EC COMPLIANCE REPORT

OCTOBER, 2022 TO MARCH, 2023



M/s. JINDAL COKE LIMITED
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Status of compliance report of environment clearance conditions of 0.425 MTPA Coke Oven Battery (Recovery type)

Ref: IA-J-11011/111/02018-1A II (I), dt. 25th May 2018

A. SPECIFIC CONDITIONS:

S. No.	Condition	Compliance
i.	The Industry shall follow coke oven standards as per Environment (P) Act, 1986. VOCs from the coke oven shall be monitored and controlled as per CPCB guideline	Being Complied. VOC from coke oven is being monitored by NABL Accredited Laboratory. The monitoring report is enclosed as Annexure – I.
ii.	Bag filter shall be installed to control the emissions from the coal crusher section, charging fume car section of the Coke Oven Plant. Online continuous monitoring system shall be installed to monitor various pollutants and data submitted to the Ministry's Regional Office at Bhubaneswar, CPCB and OPCB. 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.	Being complied. Bag filter having adequate capacity has been installed at coal crusher section, charging fume car section of the Coke Oven Plant Online continuous monitoring system has been installed at main stack of Coke Oven and data is being transmitted to SPCB & CPCB on uninterrupted basis. M type gas transfer car has been installed at the existing unit to control fugitive emission. Dust suppression system has also been installed at raw material handling areas, material transfer points to control fugitive dust emission. The entire internal road is concrete and water sprinkling systems have been installed to control fugitive emission. Photograph is attached as Annexure – II.
iii.	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. Phenolic effluent from Coke Oven complex shall be treated in the ETP of BOD Plant and recycled and reused for quenching of coke. Ammonia, Phenol and Cyanide in the effluent should be treated. Cyanide shall meet the standard of 0.2 ppm. TDS in the effluent	Complied. No ground water is being used in the plant. Zero discharge is being maintained for the entire plant. Effluent generate from process is being treated in BOD Plant and the treated water is completely reused for coke quenching. Photograph of BOD Plant is enclosed as Annexure – III.

S. No.	Condition	Compliance
	shall not be more than 2100 mg/l. The domestic waste water after treatment in STP shall be used for green belt development.	Monitoring of parameters like Ammonia, Phenol and Cyanide, TDS etc. in effluent of BOD plant is being carried out in regular interval and all the parameters are well within standard. The monitoring report is being submitted to SPCB on regular basis. The monitoring report for the period from Oct' 22 to Mar' 23 is enclosed as Appendix-A . The domestic waste water after treatment in is being reused for green belt development
iv.	Coke oven by-product effluent shall be treated as per notified standards and only treated effluents after meeting the norms shall be used for coke quenching. No fresh water shall be used for this purpose.	Being complied. Effluent generated from Coke Oven by-product is being treated in BOD plant and the treated water is completely reused for coke quenching
v.	Ground water monitoring around the solid waste disposal site/ secured landfill (SLF) shall be carried out regularly and report submitted to the Ministry's Regional Office at Bhubaneswar / CPCB and OPCB.	Being complied. As no solid waste storage area is required, hence no ground water monitoring is carried out. However ground water analysis report of periphery area is enclosed as Appendix-A .
vi.	Solid waste shall be disposed of in secured landfill designed as per the specifications of the CPCB. Coke breeze from Coke oven shall be sold to the parent company (JSL) for recycling	Noted and agreed. Coke breeze from Coke oven is being sold to outside sinter plant for recycling.
vii.	Green belt shall be developed within and around the plant premises as per the CPCB guidelines in consultation with DFO.	Being Complied. As on date, we have planted 23,500 nos. of saplings covering an area of 22 Acres till March' 2023.
viii.	As, proposed, modified wet quenching for 1 st Coke oven battery as per CPCB guidelines shall be adopted.	Noted.

B. GENERAL CONDITIONS:

S. No.	Condition	Compliance
i.	The project authorities must strictly adhere to the stipulations made by the Orissa Pollution Control Board (OPCB) and the State Government.	Being Complied. JCL is strictly adhering to the stipulations made by SPCB and the State Government.

S. No.	Condition	Compliance
ii.	No further expansion or modifications in the plant should be carried out without prior approval of the Ministry of Environment and Forests.	<p>Noted & Agreed.</p> <p>No further expansion or modifications in the plant will be carried out without prior approval of the Ministry of Environment and Forests.</p>
iii.	The gaseous emissions from various process units shall conform to the load/mass based standards notified by this Ministry on 19 th 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>Being Complied.</p> <p>The gaseous emissions from various process units are being monitored by in-house Environmental Laboratory. The analysis reports are being submitted to SPCB and MOEF regularly. The gaseous emissions are conforming to the standards.</p>
iv.	At least four ambient air quality-monitoring stations shall be established in the downward direction as well as where maximum ground level concentration of SPM, SO ₂ and NO _x 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 Bhubaneswar/OPCB/ CPCB once in six months.	<p>Complied.</p> <p>4(four) nos. of CAAQ monitoring stations have been installed at M/s. Jindal Stainless Limited, which is common for M/s. Jindal Coke Limited and M/s. Jindal Stainless Limited; as the both plant are in same premises. Monitoring of Ambient Air is being carried out for PM₁₀, PM_{2.5} and other gaseous parameters. Monitoring data is being submitted to both SPCB and MOEF regularly. Both the manual and online monitoring report of Stack & ambient air quality is for the period from Oct'22 to Mar' 23 is enclosed as Appendix-A and Appendix-B respectively. However, 1 no. of dedicated CAAQMS has been installed at Jindal Coke Limited for monitor of parameters like, PM₁₀, PM_{2.5}, SO₂, NO_x</p>

S. No.	Condition	Compliance
		and CO in ambient air.
v.	In-plant control measures for checking fugitive emissions from all the vulnerable sources of Coke oven area shall also be provide. 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 shall be provided. Fugitive emissions shall be controlled, regularly monitored and records maintained.	<p>Being Complied.</p> <p>Fugitive emission monitoring is being carried out on regular basis. The monitoring data for the period from Oct'22 to Mar' 23 is enclosed as Appendix – A.</p>
vi.	Industrial waste water shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19 th May, 1993 and 31 st December, 1993 or as amended from time to time. The treated waste water shall be utilized for plantation purpose.	<p>Being Complied.</p> <p>The plant is being maintained a zero discharge plant. Industrial waste water is treated to conform to prescribed standards and fully recycled / reused in the process and various in-house applications.</p> <p>BOD plant has been installed for treatment of process water and the treated water is being reutilize for coke quenching and other activities.</p>
vii.	The overall noise levels in and around the plant area shall be kept within the standards (85 dBA) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels should conform to the standards prescribed under EIA Rules, 1989 viz. 75 dBA (daytime) and 70 (dBA) night time.	<p>Being Complied.</p> <p>Adequate measures have been taken to keep noise level within 85 dB(A) in and around plant area. Silencers, Acoustic Enclosures are provided to control noises, in various areas of the Plant.</p> <p>The Ambient Noise levels are conforming to the standards prescribed under EPA Rules, 1989.</p> <p>Noise monitoring result are enclosed as Appendix-A.</p>
viii.	The company shall develop surface water harvesting structures to harvest the rain water for utilization in the lean	Recharging the ground water table through Rain water harvesting is not feasible as the

S. No.	Condition	Compliance
	season besides recharging the ground water table.	ground water table in the area is high. Presently, we are reusing approximately 25 m ³ /day seepage water in process as makeup water. However, for surface runoff during monsoon is being channelized to the new SRTs of JSL for storage and treatment for further reuse in other low end use as a part of CTO compliance.
ix.	Occupational Health Surveillance of the workers shall be done on a regular basis and record maintained as per the Factories Act.	Being Complied. Occupational health surveillance of the workers is being carried out on a regular basis and records are being maintained as per the Factories Act.
x.	Recommendations made in the CREP guidelines issued for the steel plants shall be implemented.	Being Complied. CREP guidelines are being followed.
xi.	The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/ EMP report for Coke oven plant.	Being Complied. The Plant has taken all the environmental protection measures and safeguards recommended in the EIA/EMP report. Further the unit has undertaken various CSR related activities (which are common for M/s. JSL, M/s. JUSL & M/s. JCL) for peripheral development including community development, educational development, safe drinking water supply, good sanitation of the villagers etc. CSR report is enclosed as Annexure – IV .
xii.	The project authorities shall utilize Rs. 6.0 Crores earmarked for the environment pollution control measures judiciously to implement the conditions stipulated by the Ministry Of Environment and Forests 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.	Noted.
xiii.	The regional office of the Ministry at Bhubaneswar/ CPCB/ OPCB will monitor the stipulated conditions. A six	Being Complied. Six monthly compliance report and

S. No.	Condition	Compliance
	monthly compliance report and the monitored data along with statistical interpretation shall be submitted to them regularly.	monitored data is being submitted to the Ministry regularly. The last compliance report for the period of Apr' 22 to Sep '22 was submitted on 30.11.2022.
xiv.	The project proponent shall inform to the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the OPCB/ Committee and may also be seen at Website of the Ministry Of Environment and Forests at http://envfor.nic.in . This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same shall be forwarded to the regional Office.	Complied.
xv.	Project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.	Complied.
xvi.	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.	Noted.
xvii.	The Ministry reserves the right to stipulate additional conditions if found necessary. The company in a time bound manner will implement these conditions	Noted.
xviii.	The above conditions will be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous Waste (Management & Handling) Rules, 2016 and the Public (Insurance) Liability Act, 1991 along with their amendments and rules.	Noted.

Status of compliance report of environment clearance conditions for Expansion of Coke production from 0.425 MTPA to 0.78 MTPA by installation of a new Stamp charged by-product recovery type Coke Oven Battery within the existing steel plant.

EC Identification No.: EC22A008OR150400

Ref: IA-J-11011/111/2018-IA-II(I), dated 9th May 2022

C. SPECIFIC CONDITIONS:

S. No.	Condition	Compliance
i.	Coke Dry Quenching (CDQ) and Zero Liquid Discharge (ZLD) facilities shall be installed in the Coke Oven Plant as committed by PP.	Noted and agreed. Coke Dry Quenching (CDQ) is under installation for the ongoing expansion project of Battery # 2. Presently the effluent generated from the existing operation of Battery # 1 (0.425 MTPA) is being treated in the BOD plant of capacity 2 x 45m ³ /hr for further reuse for coke quenching and other activities. After completion of the proposed expansion project of Battery # 2 the effluent of both the existing and proposed expansion will be treated in the existing BOD plant followed by RO and the treated water will be used in the process to maintain Zero Liquid Discharge(ZLD).
ii.	Tar sludge from BOD plant of Coke Oven shall be reused in coke oven plant	Noted and agreed. Presently, Tar sludge generated from BOD plant of Coke Oven Battery # 1 is being reused in coke oven plant and the same practice shall be followed in expansion project for Battery # 2.
iii.	Coke Oven Gas shall be desulfurized	Noted and agreed. The existing Desulfurization of Battery # 1 will take care of both the existing Battery # 1 and proposed Battery # 2 for Desulfurization.
iv.	Out of 24 acres area for green belt development, project proponent has developed green belt in 15 acres area. Remaining 9 acres area of green belt	Being complied. As on date, we have planted 23,500 nos. of saplings covering an area of 22 Acres till

S. No.	Condition	Compliance
	shall be completed by December, 2022. Three tier Green Belt shall be developed after consult with local forest department 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.	March' 2023.
v.	Greening and Paving shall be implemented in the plant area to arrest soil erosion and dust pollution from exposed soil surface.	Being Complied. At present, Greening and Paving has been done in the Battery # 1 plant area to arrest soil erosion and dust pollution from exposed soil surface. The same shall be adopted in the said expansion project of Battery # 2.
vi.	PM10 values are almost near the threshold limit, the PP shall prepare and implement a project specific Air Quality Management Plan with best practices. Develop a control strategy and incorporates in the pollution control measures. Emission control measures related to transportation shall include with the use of cleaner fuels.	Noted & agreed The ambient air quality is being monitored regularly by NABL Accredited Laboratory and the results of PM ₁₀ are within the limit. The monitor report for the period from Oct'22 to Mar' 23 is enclosed as Appendix – A . M type gas transfer car has also been installed in the Battery # 1 for control of fugitive emission. However, 1 no. of dedicated CAAQMS has been installed at Jindal Coke Limited for monitor of parameters like, PM ₁₀ , PM _{2.5} , SO ₂ , NO _x and CO in ambient air.
vii.	The progress made in the implementation of Corporate Environment Responsibility (CER) related activities shall be submitted along with six monthly compliance report to the concerned IRO and also be uploaded on the company web site.	Being complied. The implementation status of the Corporate Environment Responsibility (CER) related activities are enclosed as Annexure – V .
viii.	All stockyards shall be having impervious flooring and shall be equipped with water spray system for dust suppression. Stock yards shall also have garland drains to trap the run off material.	Being Complied. All stockyards of Battery # 1 are made of concrete flooring and water spraying systems are also installed for dust suppression with garland drains to trap the run off material. The same shall be

S. No.	Condition	Compliance
		followed in the said expansion project of Battery # 2.
ix.	All internal roads and connecting roads from project site to main highway shall be developed and maintained with suitable Million Axle Standard (MSA) as per the traffic load due to existing and proposed project	Being Complied. All the internal roads and connecting road from project site of Battery # 1 to main highway are made with RCC/PCC and the same shall be followed in the said expansion project of Battery # 2.
x.	Performance test shall be conducted on all pollution control systems every year and report shall be submitted to Regional Office of the MoEF&CC.	Noted & agreed. Performance test of APC will be carried out and reports will be submitted to Regional Office of the MoEF&CC after commissioning of the plant.
xi.	Particulate matter emission from stacks shall be less than 30 mg/Nm ³ .	Being Complied. Suitable Pollution Control equipments will be installed in the proposed Battery # 2 to confirm the Particulate Matter emission from stacks less than 30 mg/Nm ³ .
xii.	Following additional arrangements to control fugitive dust shall be provided: a. Fog / Mist Sprinklers at all conveyors point and on bulk raw material storage area (at the transfer points) like Iron Ore, Coal and for Fly Ash and similar solid waste storage areas. b. Proper covered vehicle shall be used while transport of materials. c. Wheel Washing mechanism shall be provided in entry and exit gates with complete recirculation system.	Being Complied. Compliance: At present, for existing Battery # 1 Dry fog systems have been installed at conveyors points and gun sprinklers were also installed at raw material storage yard to control fugitive emission. The same practice shall be followed in the said expansion project of Battery # 2. Compliance: At present, for existing Battery # 1 all the raw materials are transporting through rail and covered vehicles and the same shall be followed in the said expansion project of Battery # 2. Compliance: Wheel washing system with complete recirculation system will be installed.

D. SPECIFIC CONDITIONS:

S. No.	Condition	Compliance
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I. Statutory compliance		
ix.	The Environment Clearance (EC) granted to the project/ activity is strictly under the provisions of the EIA Notification, 2006 and its amendments issued from time to time. It does not tantamount/ construe to approvals/ consent/ permissions etc., required to be obtained or standards/conditions to be followed under any other Acts/Rules/Subordinate legislations, etc., as may be applicable to the project.	Noted & agreed
II. Air quality monitoring and preservation		
i	The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission as well as 04 Nos. 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>Being Complied.</p> <p>CEMS have been installed existing Coke Oven Battery # 1 stack and connected to SPCB/CPCB servers and the same practice shall be followed in the said expansion project of Battery # 2..</p> <p>Four numbers of continuous on-line ambient air quality monitoring systems (CAAQMS) have been installed which are common for JSL group Company in consultation with SPCB and the data is continuously transmitted to both SPCB & CPCB. However, one new dedicated CAAQMS has been installed at JCL.</p>
x.	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.	<p>Being Complied.</p> <p>For existing Coke Oven Battery # 1, fugitive emission monitoring at various locations are being carried out through NABL accredited laboratory on monthly basis. The same practice shall be followed in the said expansion project of Battery # 2.</p>
xi.	Sampling facility at process stacks and at quenching towers shall be provided as per CPCB guidelines for manual monitoring of emissions.	<p>Noted & agreed</p> <p>Sampling facility at process stacks will be provided.</p>

xii.	Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.	Being complied For existing Coke Oven Battery # 1 appropriate Air Pollution Control (APC) system have been provided for all the dust generating points including fugitive dust from all vulnerable sources to comply with prescribed stack emission and fugitive emission standards. The same practice shall be followed in the said expansion project of Battery # 2.
xiii.	The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.	Being complied. Leakage detection and mechanized bag cleaning facilities will be provided for better maintenance of bags.
xiv.	Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads, shop floors, roofs, regularly.	Being complied. Road sweepers are provided for cleaning of plant roads, shop floors of Coke Oven Battery # 1 and the same shall be followed in the expansion project of Battery # 2.
xv.	Recycle and reuse iron ore fines, coal and coke fines, lime fines and such other fines collected in the pollution control devices and vacuum cleaning devices in the process after briquetting/agglomeration.	Being complied. In existing Coke Oven Battery # 1 coal and coke fines collected from pollution control devices are being reused in Coke oven plant and the same shall be followed in the expansion project of Battery # 2.
xvi.	The project proponent use leak proof trucks/dumpers carrying coal and other raw materials and cover them with tarpaulin.	Being complied. Leakage detection and mechanized bag cleaning facilities will be provided for better maintenance of bags.
xvii.	Facilities for spillage collection shall be provided for coal and coke on wharf of coke oven batteries (Chain conveyors, land based industrial vacuum cleaning facility).	Noted & agreed. Provision for spillage collection shall be provided for coal and coke on wharf of coke oven batteries.
xviii.	Land-based APC system shall be installed to control coke pushing emissions.	Noted & agreed. Land-based APC system shall be installed for new Battery – 2 to control coke pushing emissions.

xix.	Monitor CO, HC and O2 in flue gases of the coke oven battery to detect combustion efficiency and cross leakages in the combustion chamber.	Noted & agreed. Flue gas monitoring is being carried out on regular basis by NABL Accredited Laboratory.
xx.	Vapor absorption system shall be provided in place of vapour compression system for cooling of coke oven gas in case of recovery type coke ovens.	Noted & agreed. Vapor absorption system has been provided for cooling of Coke Oven gas for existing Battery # 1 and shall be provided for new unit.
xxi.	Wind shelter fence and chemical spraying shall be provided on the raw material stock piles.	Being complied Wind Shelter fence with provision of water spraying system has been provided at Central Raw Material Storage Yard of existing Battery # 1 and the same shall be followed in the expansion project of Battery # 2.
xxii.	Design the ventilation system for adequate air changes as per prevailing norms for all tunnels, motor houses, Oil Cellars.	Being complied All the ventilation system are adequate for air changes as per norm for all tunnels, motor houses and shop floors of existing Coke Oven Battery # 1 and the same shall be followed in the expansion project of Battery # 2.
xxiii.	Dry quenching (CDQ) system shall be installed along with power generation facility from waste heat recovery from hot coke	Noted & agreed. Dry quenching (CDQ) system is under installation along with WHRB for power generation from waste heat recovery from hot coke.
III. Water quality monitoring and preservation		
i.	The project proponent shall provide appropriate ETP for effluents discharged from coke oven and by-product to meet the standards prescribed in G.S.R 277 (E) 31 st March 2012 (applicable to Coke oven plants) as amended from time to time.	Being Complied. The process water generated from both existing Battery # 1 and proposed Battery # 2 will be treated in the existing ETP of capacity 90 M ³ /hr (2 x 45 M ³ /hr). Continuous Effluent Quality Monitoring System (EQMS) has already been installed for existing Effluent Treatment Plant (ETP) and data is being sent to SPCB/CPSB server.

ii.	The project proponent shall monitor regularly ground water quality at least twice a year (pre- and post-monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognized under Environment (Protection) Act, 1986 and NABL accredited laboratories.	<p>Noted</p> <p>At present the unit is not drawing ground water for plant usage. However, ground water quality in nearby plant vicinity is being monitored bi-monthly by MoEF accredited / NABL accredited third party. Report is annexed as Appendix – A.</p>
iii.	Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.	<p>Being complied.</p> <p>Two nos. of Sewage Treatment Plants have been installed inside plant premises for treatment of domestic waste water generated from both JSL & JCL.</p>
iv.	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.	<p>Being complied.</p> <p>Garland drains and collection pits has been made for each stock pile of existing Coke Oven Battery # 1 to arrest the run-off in the event of heavy rains and the same shall be followed in the said expansion project of Battery # 2.</p>
v.	Water meters shall be provided at the inlet to all unit processes in the coke oven plants.	<p>Being complied</p> <p>Water meter has been provided at all water distribution points along with individual process units and shall be complied for proposed expansion project.</p>
IV. Noise monitoring and prevention		
i.	Noise pollution 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.	<p>Being complied.</p> <p>The monitoring of work zone noise level is being carried out periodically and the monitoring data is annexed as Appendix – A.</p>
V. Energy Conservation measures		
i.	Provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly;	<p>Being complied.</p> <p>Solar power generation will be installed on roof tops of buildings however a solar power plant of capacity 7 MW has been installed under the group company JSL.</p>

ii.	Provide LED lights in their offices and residential areas.	<p>Noted</p> <p>Already provided LED lights where ever possible and the same shall be followed in the said expansion project.</p>									
VII. Green Belt											
i.	The project proponent shall prepare GHG emissions inventory for the plant and shall submit the program for reduction of the same including carbon sequestration by trees.	<p>Being complied.</p> <p>GHG emissions inventory for the plant has been carried out for the FY 2021-22.</p> <table border="1" data-bbox="863 600 1460 712"> <thead> <tr> <th colspan="3">GHG Emission Intensity (TCO₂e/T)</th> </tr> </thead> <tbody> <tr> <td>2021-22</td> <td>Scope 1</td> <td>0.0617</td> </tr> <tr> <td></td> <td>Scope 2</td> <td>0.0013</td> </tr> </tbody> </table>	GHG Emission Intensity (TCO ₂ e/T)			2021-22	Scope 1	0.0617		Scope 2	0.0013
GHG Emission Intensity (TCO ₂ e/T)											
2021-22	Scope 1	0.0617									
	Scope 2	0.0013									
ii.	Project proponent shall submit a study report on Decarbonisation 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.	<p>Being complied.</p> <p>As group company JSL has taken various Decarburization programs. The detail report is enclosed as Annexure – VI.</p>									
VIII. Public hearing and Human health issues											
i.	Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented	<p>Being complied.</p> <p>Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan has been implemented for the existing operation and same shall be followed for the expansion project.</p>									
ii.	The project proponent shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protection Equipment (PPE) as per the norms.	<p>Being complied.</p> <p>Heat stress analysis for the workmen who work in high temperature work zone is being carried out and Personal Protection Equipment (PPE) as per the norms of Factory Act is being provided to the workman of Coke Oven Battery # 1. The same shall be followed in the said expansion project of Battery # 2.</p>									

iii.	Occupational health surveillance of the workers shall be done on a regular basis and records maintained.	<p>Being complied.</p> <p>Annual health check up of workers of Coke Oven Battery # 1 is being carried out and records are maintained. The same shall be followed in the said expansion project of Battery # 2.</p>
IX. Environment Management		
i.	The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 30/09/2020. As part of Corporate Environment Responsibility (CER) activity, company shall adopt nearby villages namely Siaria, Banshipur, Hudi Shai and Katipur.	<p>Noted.</p> <p>Necessary initiative has been taken to adopt the villages as per the need base programme.</p>
ii.	The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.	<p>Being complied.</p> <p>JCL already has framed Environmental Policy as a part of the QEOHS (Quality, Environment, Occupational Health & Safety) policy framework and is committed to maintain environment friendly, safe, healthy and sustainable working condition in all its operations. The same shall be followed in the said expansion project.</p>
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.	<p>Being complied</p> <p>JCL already has a well-constituted Environment, Horticulture & Safety (EHS) department with qualified and experienced officers under the administrative control of Head EHS and Head EHS directly report to the Plant Head</p>

X. Miscellaneous		
i.	The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.	<p>Complied</p> <p>Advertisement on grant of Environment Clearance has been published in newspapers namely The New Indian Express (English) and Prameya (Odia) on 14.05.2022. The copy of the news clipping is enclosed as Annexure – VII. Environment Clearance is displayed in the website of the company permanently.</p>
ii.	The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.	<p>Complied.</p> <p>The copies of the environmental clearance have been submitted to the Heads of local bodies, Panchayats. On 18.05.2022 vide our letter no. JCL/JRD/ENV/2022-23/04.</p>
iii.	The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.	<p>Being complied</p> <p>Presently, six-monthly reports on the status of the compliance of the stipulated environmental conditions uploaded on company website and same shall be continued.</p>
iv.	The project proponent shall monitor the criteria pollutants level namely; PM10, SO2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.	<p>Being complied</p> <p>Both online and manual Stack Monitoring is being carried out and the data are displayed on the display board installed at main gate for public view. The same shall be continued in the said expansion project.</p>
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.	<p>Being complied</p> <p>Presently, six-monthly reports on the status of the compliance of the stipulated environmental conditions is being submitted to MOEF&CC and also uploaded on MoEF&CC website.</p>

vi.	The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.	Being complied Presently, environmental statement for each financial year in Form-V is being submitted to SPCB, Odisha in due time and last report was submitted to SPCB on 28.09.2022. The same shall be continued in the said expansion project.
vii.	The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.	Noted & agreed
viii.	The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.	Noted & agreed 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 will be complied.
ix.	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).	Noted & agreed
x.	Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.	Noted & agreed
xi.	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.	Noted & agreed
xii.	The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.	Noted & agreed

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

LIST OF ENCLOSURES

Sl. No.	Description	Annexure /Appendix
1.	VOC monitoring report	Annexure - I
2.	Air Pollution Control System	Annexure - II
3.	BOD Plant	Annexure - III
4.	CSR Report Oct' 2022 to Mar' 2023	Annexure - IV
5.	CER compliance	Annexure - V
6.	Decarbonisation report	Annexure - VI
7.	Copy of advertisement	Annexure - VII
8.	Manual Monitoring Report(Oct' 2022 to Mar' 2023)	Appendix –A
9.	Online Monitoring Report (Oct' 2022 to Mar' 2023)	Appendix –B

Mitra S.K.Private Limited



Building No. P- 48, Udayan Industrial Estate,
3, Pagladanga Road,
Kolkata 700015. West Bengal
Tel. : 91 33 23230072. Fax : 91 33 23230078.
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Web : www.mitrask.com



Report No. :C/2022/740
Sample No. :MSK/KOL/2022/629

ULR: TC-695022000000740F

ANALYSIS RESULT

A : GENERAL INFORMATION ABOUT STACK :			
1 Stack connected to	:	Coke Oven	
2 Emission due to	:	Burning of Coal	
3 Material of construction of Stack	:	Concrete	
4 Shape of Stack	:	Circular	
5 Whether Stack is provided with permanent platform	:	Yes	
B : PHYSICAL CHARACTERISTICS OF STACK :			
1 Height of Stack from ground level	:	120 m	
2 Diameter of Stack at sampling point	:	5.865 m	
3 Height of the sampling point from ground level	:	37 m	
4 Area of Stack	:	27.0163 m ²	
C : ANALYSIS/CHARACTERSTIC OF STACK :			
1 Fuel used : Coal	:	2. Fuel consumption: ---	
D : RESULTS OF SAMPLING & ANALYSIS OF GASEOUS EMISSION:			
	Unit	RESULT	METHOD
1 Temperature of emission	°C	185	IS:11255 Part-3
2 Barometric pressure	mm of Hg	751	IS:11255 Part-3
3 Velocity of gas	m/sec	6.76	IS:11255 Part-3
4 Quantity of gas flow	Nm ³ /hr	412351.21	IS:11255 Part-3
E : POLLUTION			
Details of pollution control devices attached with the stack: Nil			

Report prepared by:
Signature : *S. Chakraborty*
Name : Mr. Subyendu Chakraborty
Designation : QA Assistant

Report Verified By
Signature : *P. Dutta*
Name : Ms. Paulami Dutta
Designation : Executive QA

Report Sign By Authorized Signatory
Signature : *J. Soumyadeep*
Name : Dr. Soumyadeep Mukhopadhyay
Designation : Lab In Charge

Mitra S.K.Private Limited

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TC-6950

ULR: TC-695022000000740F**Report No.** :C/2022/740**Sample No.** :MSK/KOL/2022/629**ANALYSIS RESULT**

D : RESULTS OF SAMPLING & ANALYSIS OF GASEOUS EMISSION :		Unit	RESULT	METHOD
22	Volatile Organic Compounds (VOCs)			USEPA 18, 25/09/1996 & USEPA 31, 01/12/1996
i)	Benzene	mg/m ³	<0.01	
ii)	Toluene	mg/m ³	<0.01	
iii)	Ethyl Benzene	mg/m ³	<0.01	
iv)	O-Xylene	mg/m ³	<0.01	
v)	M- Xylene	mg/m ³	<0.01	
vi)	P- Xylene	mg/m ³	<0.01	
vii)	Chlorobenzene	mg/m ³	<0.01	
viii)	Isopropyl benzene	mg/m ³	<0.01	
ix)	Bromobenzene	mg/m ³	<0.01	
x)	1,3,5- Trimethyl benzene	mg/m ³	<0.01	
xi)	1,2,4- Trimethyl benzene	mg/m ³	<0.01	
xii)	Sec- Butylbenzene	mg/m ³	<0.01	
xiii)	Tert- Butylbenzene	mg/m ³	<0.01	
xiv)	1,4- Dichlorobenzene	mg/m ³	<0.01	
xv)	n-Butylbenzene	mg/m ³	<0.01	
xvi)	1,2,3- Trichlorobenzene	mg/m ³	<0.01	
xvii)	Trichloroethylene	mg/m ³	<0.01	
xviii)	1,1,1,2- Tetrachloroethane	mg/m ³	<0.01	
xix)	Hexachlorobutadiene	mg/m ³	<0.01	
xx)	1,2-Dibromo-3-Chloropropapane	mg/m ³	<0.01	

End

Report prepared by:

Signature : *S. Subyendu Chakraborty*
Name : Mr. Subyendu Chakraborty
Designation : QA Assistant

Report Verified By

Signature : *P. Dutta*
Name : Ms. Paulami Dutta
Designation : Executive QA

Report Sign By Authorized Signatory

Signature : *S. Soumyadeep Mukhopadhyay*
Name : Dr. Soumyadeep Mukhopadhyay
Designation : Lab In charge

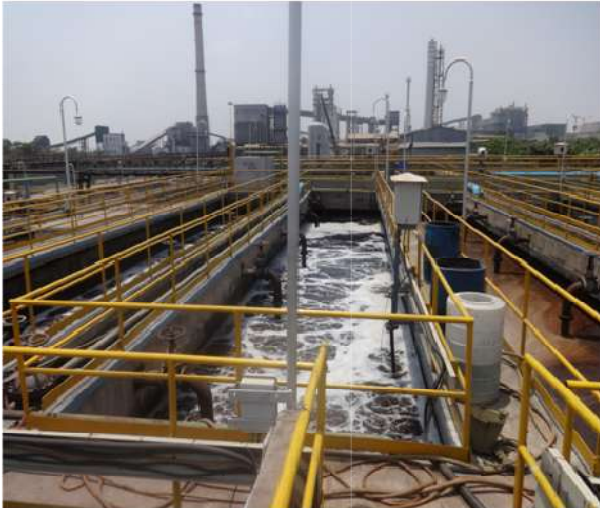


WATER SPRINKLERS AT COAL STACK YARD



WATER SPRINKLER AT COKE OVEN AREA

Waste Water Treatment Facility At COBP





ANNUAL REPORT



Corporate Social Responsibility-2022-23
Enriching Lives..... Bringing Smile

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About JSL CSR JAJPUR

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

BENEFICIARY QUOTES

Ray of Hope

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



*Mrs. Dalimba Mallick
Balungabandi, Danagadi, Jajpur
Odisha*



Mushroom Cultivation:- Brings better tomorrow.....

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

Mrs. Gouri Patra, Trijanga, Danagadi



EXECUTIVE SUMMARY

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

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

Glimpses of the Activities during the Year

OUR HEALTH CARE INITIATIVES

Static Clinic Centre, TRC

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



Health Awareness camps

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



Health Camps in Villages

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



Health care service to elderly people at Doorstep

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



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

Project on Elimination of Disability from Clubfoot in Children

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



Eye Screening Camp for Truckers

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



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

ENTREPRENEURSHIP DEVELOPMENT PROJECT



JIIT Electrical workshop

JIIT Electrical Workshop has been providing quality services in various electrical trades such as fan and motor repairs, house wiring etc. to various corporate clients like Jindal Stainless Ltd, Jajpur JUSCO, Ekalavya Residential School, Apartments and other private vendors on a regular basis. JIIT Electrical had received the order for the rewinding of fans amounting to Rs. 3,88,300/- from JSL under annual rate contract. The workshop

had also received an order from Jindal Coke Limited amounting to Rs. 1,36,800 for the fixing of electrical items in 64 flats at Spring Villa apartment. Besides it has taken up the maintenance works of the water purification systems installed in schools by JSF. The electric connection to the Material Recovery Facility run by Green Dream Foundation were also done by the unit.

JIIT Computer Education Centre

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



Beauty & Wellness Training Centre

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



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

Women Empowerment and Gender Equality

ASMITA Production Centre

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



Training on appliqué works

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



SAHAJA Project

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



Sampanna Jeevika Producer Company

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



MoU signed with ICCo NGO

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



Tailoring Training Center

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



conducted.

E- Rickshaw Provided to SHGs

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



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

SHG Training

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



Asmita Boutique

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



Annual Sports event

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



EDUCATION & SKILL TRAINING

Village Library project

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



Literature Development Programme

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



Fire and safety training is organised in schools.

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



Stainless Steel Fabrication Training at the Government Polytechnic

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



Teachers support to school



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

Safe Drinking Water Project

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



Foot Ball Coaching

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



Football Coaching at Kaliapani:

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

RURAL DEVELOPMENT PROJECTS

Doubling Income Project @Glance

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

Sustainable Waste Management Project

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



Important Visitors

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



girls about the sewing projects that they were working on.

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

Cabinet Minister, Steel Interacted with SHG members:

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



Media Clippings

Jindal Stainless Foundation Chairman's visit to various CSR program

JAJPUR,(AOBureau): Mrs. Deepika Jindal, Chairperson, Jindal Stainless Foundation and Ms. Savitri Devi Jindal, Chairperson, Jindal Group of Industries, visited the various social philanthropy projects run by Jindal Stainless Ltd on 03.11.2022. They first, visited Solei Sewing Training Centre, Dangadi, JIIT Electrical Workshop, Sahaj Sanitary Napkin Making Unit, Asmita Production Centre, Waste Material Management Centre, Dangadi and emphasized on the quality and value of each work. Later, she attended a



meeting organized by women SHGs at Bagei Mahadev Temple premises in Balungabandi village, observed the quality of masalas prepared by women and

expressed all necessary cooperation for mass marketing. The Bagei Mahadev temple and its premises have been developed by the Jindal Company at a cost of

Rs 32 lakhs. Apart from this, members and workers have published autobiographies of how they have developed by being associated with Jindal

Foundation for the last 10/12 years. Seeing that Deepika Devi and Savitri Devi gained self-satisfaction and further discussed how the development of women and the quality of computer education can be improved. The visit was attended by Brigadier Rajeev Williams, CSR Corporate Head of Jindal Stainless Ltd., Ms. Sangeeta Singh, Mr. Sukanta Kumar Rath, Mr. Sanjay Kumar Mohanty, Mr. Hemant Kumar B. 8/8 and the staff of Jindal Stainless Foundation, Jajpur.

A photograph of a paved road winding through a dense forest of tall, thin trees with green foliage. The road is in the foreground, leading into the distance. The trees are tall and thin, with a canopy of green leaves. The sky is visible through the trees, appearing bright and slightly overcast. The overall scene is a peaceful, natural setting.

THE JOURNEY CONTINUES.....

CER Compliance report

Major Issue Raised	Action Plan	Time Line for Execution			Total Budget (Lakhs)	Amount Spent as on date
		Year 1 st	Year 2 nd	Year 3 rd		
Area Development						
Development of park	Set up of park along with area development at two nos. of places.	Development of park with construction of tennis court at village panikoili. Status: The development Work has been successfully Completed.	Development of park at village Telibahali by construction of boundary wall, land scaping, Temple Development.	Continuation of Development work of park at village Telibahali by arrangement of permanent entire walkway, sitting arrangement.	180	40
Development of public community hall	New establishment of community hall at 5 nos. of villages.	Set up in villages namely: Khurunti Malikasahi by providing new building with electrification.	Set up in villages namely: Ostapal by providing new building with electrification. Status: Instead of Community Centre as per requested by villagers, Khudurukuni Pujamandap with Electrification has been done.	Set up in villages namely: Karadapal, Suanlo by providing new Building with electrification. Status: Initiative taken to commence the Work.	60	20
Plantation Activities in peripheral villages	Plantation drive at five numbers of village.	Village: Solei Actual area and number of tress to be decided based survey and discussion with local authorities. Report will be sent to MoEF & CC as a part of Half Yearly EC Compliance.	Village: Marutikar, Danagadi Actual area and number of tress to be decided based survey and discussion with local authorities. Report will be sent to MoEF & CC as a part of Half Yearly EC Compliance.	Village: Patrangi, Mantira: Actual area and number of tress to be decided based survey and discussion with local authorities. Report will be sent to MoEF & CC as a part of Half Yearly EC Compliance.	30	9
Medical Facilities						
Provision of health care facilities	Establishment of Homeopathic clinic at six numbers of viilages.	At village: Kumbirgadia, Marutikar Construction of homeopathic clinic along with supply of essential medicines. Status: Establishment of Homeopathy clinic at Kumbhiragadia and Classroom at marutikar has been successfully Completed.	At village: Mantira, Olala Construction of building for homeopathic clinic along with supply of essential medicines. Status: The Work is in progress.	At village: Tikara, Danagadi Construction of building for homeopathic clinic along with supply of essential medicines.	70	40
Local Employment						

Provide employment with preference to local people	Priority to be given for local employment during both construction and operation phase.	During Construction phase it is envisaged for Direct employment of 40 Nos. and Indirect employment of 200 Nos. & during operation phase direct employment of 150 Nos. and Indirect employment of 120 Nos. During construction phase 70% indirect employment and 30 %direct employment will be through local employment. During operation phase 90 % indirect employment and 30% directemployment will be through local employment.			-	
Education						
Renovation/Construction of additional new 2 Nos. of classrooms and electrification with sanitation facility at four nos. school.	At village : Danagadi Status: Classroom and toilet of Sisumandir at Danagadi has been completed.	At village : Kharadi, Kankadajhar:	At village : JK Road	60	35	
Facilitate students in providing special training on Stainless Steel related works to make knowledgeable in getting jobs in steel sector.	Special training on Steel Stainless related works to student on nearby village at Ragadi Polytechnic College	Shall Continue	Shall Continue	15		
Women Empowerment						
Strengthening of women empowerment measures in peripheral villages.	Focus on various livelihood programme for women empowerment in peripheral villages.	Livelihood promotion that includes tailoring, beauty parlor, training, skill development training at village mantira. Status: Its ongoing as committed	Livelihood promotion that includes dairy farming, poultry, goatery, wheat grinding at village Jakhapura. Status: Its ongoing as committed	Establishment of skill development center to provide training in Computer education, electrical, mechanical at village Trijanga (Dangadi). Status: Its ongoing as committed	150	35
Environment						
Air and Water pollution control	Effective APC devices to be in place during plant operation and set up of ETP for treatment of process of effluent. No waste water discharge to be ensured.	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.			As per EMP budget of plant	
Total				565	179	

Report on De carbonization programme

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

Projects have been identified under the following decarbonization levers

a) Energy Substitution:

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

b) Feedstock optimization & Circularity:

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

c) Process Reconfiguration:

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

d) Logistics Decarbonization:

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

e) Digitalization:

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

f) Sustainable Suppliers:

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

Newspaper cutting

JINDAL **ସର୍ବସାଧାରଣ ସୂଚନା**

ଏତଦ୍ୱାରା ସର୍ବସାଧାରଣଙ୍କ ଅବଗତ ନିମନ୍ତେ ସୂଚିତ କରାଯାଉଛି କି ମେସର୍ସ ଜିନ୍ଦଲ କୋକ ଲିମିଟେଡ (ଜେସିଏଲ) ଏହାର କୋକ ଉତ୍ପାଦନ କ୍ଷମତା ୦.୪୨୫ MTPA ରୁ ୦.୭୮ MTPA ସମ୍ପ୍ରସାରଣ ନିମନ୍ତେ ଏକ ନୂତନ ଷ୍ଟାମ୍ପ ଚାର୍ଜ ସହିତ ବାଇପ୍ରଡକ୍ଟ ପୁନଃରୁଦ୍ଧାର ପଦ୍ଧତି କୋକ ଓଭନ ବ୍ୟାଚେରୀ ସ୍ଥାପନ କରିବା ନିମନ୍ତେ ଜଙ୍ଗଲ, ପରିବେଶ ଓ ପାଗ ପରିବର୍ତ୍ତନ ମନ୍ତ୍ରାଳୟ, ନୂଆଦିଲ୍ଲୀରୁ ଠାରୁ ପରିବେଶ ମଞ୍ଜୁରୀ ପତ୍ର ସଂଖ୍ୟା IA-J-11011/111/2018-IA-II(I), ତାରିଖ ୦୯.୦୫.୨୦୨୨ରେ ହାସଲ କରିଅଛି । ଏହି ପ୍ରକଳ୍ପଟି କଳିଙ୍ଗ ନଗର ଶିଳ୍ପାଞ୍ଚଳ, ଦାନଗଦି, ଜିଲ୍ଲା- ଯାଜପୁର- ୭୫୫୦୨୬ ଠାରେ ଅବସ୍ଥିତ । ମନ୍ତ୍ରାଳୟ ପ୍ରମାଣ ପତ୍ରର ନକଲ ରାଜ୍ୟ ପ୍ରଦୂଷଣ ନିୟନ୍ତ୍ରଣ ବୋର୍ଡ଼ ଠାରେ ଉପଲବ୍ଧ ହେବା ସହିତ ଜଙ୍ଗଲ, ପରିବେଶ ଓ ପାଗ ପରିବର୍ତ୍ତନ ମନ୍ତ୍ରାଳୟର ୱେବସାଇଟ <http://envfor.nic.in> ରେ ଉପଲବ୍ଧ ହୋଇପାରିବ ।

S/d- ନିର୍ଦ୍ଦେଶକ, ମେସର୍ସ ଜିନ୍ଦଲ କୋକ ଲିମିଟେଡ଼

Public Notice on grant of Environment Clearance in Odia newspaper @ Prameya, dated 14.05.2022

JINDAL **PUBLIC NOTICE**

It is being brought to the notice of all that M/s Jindal Coke Limited (JCL) has obtained Environment Clearance from Ministry of Environment, Forest & Climate Change, New Delhi; vide MoEFCC Letter No. IA-J-11011/111/2018-IA-II(I), dated 9th May, 2022 for expansion of Coke Production From 0.425 MTPA to 0.78 MTPA by Installation of a New Stamp Charged By Product Recovery Type Coke Oven within the existing plant located at Kalinga Nagar Industrial Complex (KNIC), Danagadi, Dist.- Jajpur-755026. The copies of the clearance letter are available with SPCB, Odisha and may also be seen at Website of the Ministry of Environment, Forest & Climate Change at <http://envfor.nic.in>.

Sd/- Director
M/s Jindal Coke Limited

CS Scanned with CamScanner

Public Notice on grant of Environment Clearance in English news paper @ The New Indian Express, dated 14.05.2022

Environmental Monitoring Report for the Period October-2022 to March-2023

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- A. Stack Analysis
- B. Ambient Air Quality
- C. Fugitive Visible Emission
- D. Noise Monitoring
- E. Ground Water Quality
- F. Treated Effluent Quality At COBP PETP- OUTLET

A. Stack Analysis:

Monitoring Results of Stack Analysis								
Sl. No.	Sampling Stations	Monthly Average Concentration of Particulate Matter (mg/Nm ³)						Permissible limits as per SPCB
		Oct. - 22	Nov. - 22	Dec. - 22	Jan. -23	Feb. - 23	March - 23	
1	Coke Oven Main Stack	42.8	44.6	41.8	42.2	40.4	44.3	50

B. Ambient Air Monitoring Report:

AAQ near Nursery

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

AAQ near Security Barrack

Sl. No.	Parameters	Monthly Average concentration						Permissible limits as per SPCB
		Oct. - 22	Nov. - 22	Dec. - 22	Jan. -23	Feb. - 23	Mar. - 23	
1	PM ₁₀ µg/m ³	77.6	78.2	77.6	79.6	80.6	82.1	100(24 Hrs)
2	PM _{2.5} µg/m ³	35.9	35.6	35.2	38.4	38.8	39.6	60 (24 Hrs)
3	SO ₂ µg/m ³	22.8	23.2	23.4	24.4	25.2	27.4	80(24 Hrs)
4	NO _x µg/m ³	16.6	16.8	17.0	19.2	19.4	19.8	80(24 Hrs)
NB: Parameters such as Lead, Benzene, Benzopyrene, Arsenic & Nickel found to be below detection limit (BDL).								

AAQ near Admin. Building

Sl. No.	Parameters	Monthly Average concentration						Permissible limits as per SPCB
		Oct. - 22	Nov. - 22	Dec. - 22	Jan. -23	Feb. - 23	Mar. - 23	
1	PM ₁₀ µg/m ³	74.3	72.8	75.6	77.6	79.2	80.6	100(24 Hrs)
2	PM _{2.5} µg/m ³	32.8	32.4	34.2	36.4	38.2	38.8	60 (24 Hrs)
3	SO ₂ µg/m ³	20.6	20.0	21.8	22.6	24.2	26.6	80(24 Hrs)
4	NO _x µg/m ³	14.4	14.2	16.1	18.2	18.4	19.2	80(24 Hrs)
NB: Parameters such as Lead, Benzene, Benzopyrene, Arsenic & Nickel found to be below detection limit (BDL).								

AAQ near Silo DCS Panel Room

Sl. No.	Parameters	Monthly Average concentration						Permissible limits as per NAAQS, 2009
		Oct. - 22	Nov. - 22	Dec. - 22	Jan. -23	Feb. - 23	Mar. - 23	
1	PM ₁₀ µg/m ³	75.8	76.1	76.8	79.8	79.6	81.7	100(24 Hrs)
2	PM _{2.5} µg/m ³	33.4	33.2	34.6	38.8	38.4	39.0	60 (24 Hrs)
3	SO ₂ µg/m ³	20.8	20.6	22.4	24.6	24.4	26.8	80(24 Hrs)
4	NO _x µg/m ³	15.2	15.4	16.8	18.8	18.6	19.6	80(24 Hrs)
NB: Parameters such as Lead, Benzene, Benzopyrene, Arsenic & Nickel found to be below detection limit (BDL).								

B. Fugitive Visual Emission:

Sl. No.	Parameters	Monthly Average concentration						Standard
		Oct. - 22	Nov. - 22	Dec. - 22	Jan. - 23	Feb. - 23	Mar. - 23	
1	Leakage from Door (PLD)	3.34	3.33	3.34	3.75	3.75	3.75	5
2	Leakage from Charging Lids (PLL)	0.52	0.52	0.52	0.52	0.52	0.52	1
3	Leakage from AP Covers (PLO)	2.35	2.34	3.13	2.34	3.13	2.34	4
4	Charging Emission (Second/ Charge (HPLA)	14.0	11.0	14.0	13.0	14.0	13.0	16
5	Carbon Monoxide Kg/MT of Coke product	2.4	2.6	2.4	2.6	2.7	2.4	3

C. Noise Monitoring Report:

i. Ambient Noise Monitoring Data

Noise Level Monitoring Results at Different Locations of the Plant								
Sl. No.	Location	Monthly Average Noise Level						Permissible limits as per CPCB
		Oct. - 22	Nov. - 22	Dec. - 22	Jan. - 23	Feb. - 23	Mar. - 23	
DAY TIME								
1.	At Nursery	59.8	60.2	62.2	64.0	66.2	68.2	75 dB(A)
2.	At Security Barrack	65.5	68.6	68.4	67.8	69.4	70.8	
3.	At Admin. Building	67.2	67.8	68.0	70.4	70.0	70.6	
4.	At Silo DCS panel room	65.0	66.2	70.4	72.2	70.8	72.2	
NIGHT TIME								
1.	At Nursery	50.4	50.8	53.4	55.2	55.0	57.5	70 dB(A)
2.	At Security Barrack	58.0	58.4	56.7	56.2	56.4	58.1	
3.	At Admin. Building	56.4	56.2	54.8	55.1	55.2	56.8	
4.	At Silo DCS panel room	56.8	56.4	55.0	56.6	55.8	55.2	

ii. Work Zone Noise Monitoring Data

Noise Level Monitoring Results at Different Locations of the Plant								
Sl. No.	Location	Monthly Average Noise Level (Leq in dB(A))						Permissible limits as per Factory Act
		Oct. - 22	Nov. - 22	Dec. - 22	Jan. - 23	Feb. - 23	Mar. - 23	
1	Near Admin. Building (CO)	75.2	75.8	76.2	77.0	78.2	78.8	85 dB(A)
2	Near By product area (CO)	76.4	76.8	76.0	76.4	76.8	78.2	
3	Near Secondary Crusher area (CO)	72.8	72.4	74.0	75.5	75.0	76.4	
4	Near PETP area (CO)	69.4	71.1	69.8	70.2	72.4	70.6	
5	Near Battery coal tower area (CO)	79.5	79.2	78.3	77.8	76.2	78.6	

D. Ground Water Quality:

Table D1: January'23

Sl. No.	Parameter	Limit as per IS 10500 :2012		Date of sampling: 24.01.2023	
		Acceptable Limit	Permissible limit	GW1	GW2
1	Colour, Hazen Units	5	15	<5	<5
2	Odour	Agreeable	Agreeable	Agreeable	Agreeable
3	pH	6.5 - 8.5	6.5 - 8.5	7.5	6.9
4	Turbidity, NTU	1	5	7.8	9.0
5	Total dissolve solid, mg/l	500	2000	217.4	128.4
6	Total Hardness (as CaCO ₃), mg/l	200	600	118.2	97.1
7	Iron (as Fe), mg/l	1.0	1.0	0.8	0.4
8	Chloride (as Cl), mg/l	250	1000	34.0	25.8
9	Residual Free Chlorine, mg/l	0.2	1.0	<0.1	<0.1
10	Fluoride (as F), mg/l	1.0	1.5	<0.1	<0.1
11	Calcium (as Ca), mg/l	75	200	59.2	34.8
12	Magnesium(as Mg), mg/l	30	100	16.2	24.3
13	Copper(as Cu), mg/l	0.05	1.5	<0.02	<0.02
14	Manganese (as Mn), mg/l	0.1	0.3	<0.05	<0.05
15	Sulphate (as SO ₄), mg/l	200	400	4.2	1.6
16	Nitrate (as NO ₃), mg/l	45	45	2.8	0.8

17	Phenol (as C ₆ H ₅ OH), mg/l	0.001	0.002	< 0.002	< 0.002
18	Mercury,(as Hg), mg/l	0.001	0.001	<0.004	<0.004
19	Cadmium (as Cd), mg/l	0.003	0.003	<0.01	<0.01
20	Selenium (as Se), mg/l	0.01	0.01	< 0.001	< 0.001
21	Arsenic (as As), mg/l	0.01	0.05	< 0.004	< 0.004
22	Cyanide (as CN), mg/l	0.05	0.05	<0.02	<0.02
23	Lead (as Pb), mg/l	0.01	0.01	<0.01	<0.01
24	Zinc (as Zn), mg/l	5	15	<0.1	<0.1
25	Anionic Detergents (as MBAS), mg/l	0.2	1.0	<0.1	<0.1
26	Total Chromium (as Cr), mg/l	0.05	0.05	< 0.02	<0.02
27	Mineral Oil, mg/l	0.5	0.5	< 0.2	< 0.2
28	Total Alkalinity(as CaCO ₃), mg/l	200	600	132.7	114.5
29	Aluminium (as Al), mg/l	0.03	0.2	< 0.1	< 0.1
30	Boron (as B), mg/l	0.5	1.0	< 0.1	< 0.1
31	Nickel (as Ni), mg/l	0.02	0.02	<0.05	<0.05
32	Molybdenum (as Mo), mg/l	0.07	0.07	<0.1	<0.1
33	Coliform Organisms, (MPN/100ml)	Nil	Nil	Absent	Absent
34	E Coli (MPN/100 ml)	Nil	Nil	Absent	Absent

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

E. Treated Effluent Quality At COBP – PETP OUTLET:

Table E1:

Sl. No.	PARAMETER	Norm as per Consent Order	Oct. -2022	Nov.-2022
			Date of Sampling - 16.10.2022	Date of Sampling - 03.11.2022
1	Colour & Odour	Colourless & Odourless	<5 & Agreeable	<5 & Agreeable
2	Suspended Solid, mg/l	100	44.7	58.2
3	Total Dissolved Solids, mg/l	2100	476.2	554.7
4	pH Value	5.5 to 9.0	7.1	7.4
5	Temperature, 0C	Shall not exceed by + 50C	26.2	25.3
6	Oil & grease, mg/l	10	5.2	6.9
7	Total Res. Chlorine, mg/l	1	ND	ND
8	BOD (3 days at 270C), mg/l	30	17.8	16.2

9	COD, mg/l	250	97.6	78.8
10	Hexavalent chromium (as Cr6+), mg/l	0.1	<0.01	<0.01
11	Cyanide (as CN), mg/l	0.2	<0.01	<0.01
12	Fluoride (as F), mg/l	2	<0.1	<0.1
13	Sulphide (as S) mg/l	2	<1.0	<1.0
14	Phenol (as C6H5OH), mg/l	1	<0.05	<0.05
15	Iron (as Fe), mg/l	3	2.0	1.8
16	Nitrate Nitrogen, mg/l	10	6.5	6.2
17	Dissolved Phosphate, mg/l	5	0.4	0.6
18	Arsenic, mg/l	0.2	< 0.004	< 0.004
19	Lead, mg/l	0.1	<0.01	<0.01
20	Zinc, mg/l	5	<0.01	<0.01
21	Mercury, mg/l	0.01	<0.004	<0.004
22	Total Chromium, mg/l	2	0.2	0.1
23	Copper, mg/l	3	<0.02	<0.02
24	Nickel, mg/l	3	<0.05	<0.05
25	Manganese, mg/l	2	<0.05	<0.05
26	Vanadium, mg/l	0.2	<0.02	<0.2
27	Selenium, mg/l	0.05	<0.001	<0.001
28	Bio-assay test	90% survival of fish after 96 hr. in 100% effluent	93%	94%

Table E2:

Sl. No.	PARAMETER	Norm as per Consent Order	Dec. - 2022	Jan.-2023
			Date of Sampling - 12.12.2022	Date of Sampling - 23.01.2023
1	Colour & Odour	Colourless & Odourless	<5 & Agreeable	<5 & Agreeable
2	Suspended Solid, mg/l	100	46.7	55.4
3	Total Dissolved Solids, mg/l	2100	684.4	628.2
4	pH Value	5.5 to 9.0	7.8	7.4
5	Temperature, 0C	Shall not exceed by + 50C	23.8	22.6
6	Oil & grease, mg/l	10	7.2	7.4
7	Total Res. Chlorine, mg/l	1	ND	ND
8	BOD (3 days at 270C), mg/l	30	18.6	16.8
9	COD, mg/l	250	82.4	74.4
10	Hexavalent chromium (as Cr6+), mg/l	0.1	<0.01	<0.01
11	Cyanide (as CN), mg/l	0.2	<0.01	<0.02
12	Fluoride (as F), mg/l	2	<0.1	<0.1
13	Sulphide (as S) mg/l	2	<1.0	<1.0
14	Phenol (as C6H5OH), mg/l	1	<0.05	<0.05
15	Iron (as Fe), mg/l	3	1.4	1.2
16	Nitrate Nitrogen, mg/l	10	7.4	7.2
17	Dissolved Phosphate, mg/l	5	0.8	0.8
18	Arsenic, mg/l	0.2	< 0.004	< 0.004
19	Lead, mg/l	0.1	<0.01	<0.01

20	Zinc, mg/l	5	<0.01	<0.01
21	Mercury, mg/l	0.01	<0.004	<0.004
22	Total Chromium, mg/l	2	0.1	0.1
23	Copper, mg/l	3	<0.02	<0.02
24	Nickel, mg/l	3	<0.05	<0.05
25	Manganese, mg/l	2	<0.05	<0.05
26	Vanadium, mg/l	0.2	<0.2	<0.2
27	Selenium, mg/l	0.05	<0.001	<0.001
28	Bio-assay test	90% survival of fish after 96 hr. in 100% effluent	93%	94%

Table E₃:

Sl. No.	PARAMETER	Norm as per Consent Order	Feb. - 2023	Mar. - 2023
			Date of Sampling - 23.02.2023	Date of Sampling - 24.09.2022
1	Colour & Odour	Colourless & Odourless	<5 & Agreeable	<5 & Agreeable
2	Suspended Solid, mg/l	100	45.2	48.6
3	Total Dissolved Solids, mg/l	2100	703.8	672.8
4	pH Value	5.5 to 9.0	7.1	7.3
5	Temperature, 0C	Shall not exceed by + 50C	24.6	25.8
6	Oil & grease, mg/l	10	6.2	6.6
7	Total Res. Chlorine, mg/l	1	ND	ND
8	BOD (3 days at 270C), mg/l	30	15.8	15.4
9	COD, mg/l	250	68.4	66.4
10	Hexavalent chromium (as Cr6+), mg/l	0.1	<0.01	<0.01
11	Cyanide (as CN), mg/l	0.2	<0.02	<0.02
12	Fluoride (as F), mg/l	2	<0.1	<0.1
13	Sulphide (as S) mg/l	2	<1.0	<0.1
14	Phenol (as C6H5OH), mg/l	1	<0.05	<0.05
15	Iron (as Fe), mg/l	3	1.4	1.6
16	Nitrate Nitrogen, mg/l	10	6.8	6.4
17	Dissolved Phosphate, mg/l	5	0.6	0.8
18	Arsenic, mg/l	0.2	< 0.004	< 0.004
19	Lead, mg/l	0.1	<0.01	<0.01
20	Zinc, mg/l	5	<0.01	<0.01
21	Mercury, mg/l	0.01	<0.004	<0.004
22	Total Chromium, mg/l	2	0.1	0.1
23	Copper, mg/l	3	<0.01	<0.02
24	Nickel, mg/l	3	<0.05	<0.05
25	Manganese, mg/l	2	<0.05	<0.055
26	Vanadium, mg/l	0.2	<0.2	<0.2
27	Selenium, mg/l	0.05	<0.001	<0.001
28	Bio-assay test	90% survival of fish after 96 hr. in 100% effluent	92%	91%

A. Continuous Ambient Air Quality Monitoring System (CAAQMS) report:**Location - Near Nursery**

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

Location - Near Security Barrack

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

Location - Near CPP

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

Location - Near Tata Corner

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

B. Continuous Emission Monitoring System (CEMS) report

Sl. No.	Sampling Stations	Parameters	Monthly Average Concentration of PM and SO ₂ (mg/Nm ³)						Permissible limits as per SPCB
			Oct'22	Nov'22	Dec'22	Jan'23	Feb'23	March'23	
1	Coke Oven Stack	PM	33.17	33.18	33.19	33.18	33.13	34.87	50
		SO ₂	149.98	150.06	150.09	150.06	150.01	138.44	800

C. Effluent Quality Monitoring System (EQMS) report:

Location: Coke Oven ETP Out let

Sl. No.	Parameters	Monthly Average concentration						Permissible limits as per SPCB
		Oct'22	Nov'22	Dec'22	Jan'23	Feb'23	March'23	
1	TSS	22.55	23.63	24.15	22.71	22.86	26.82	0 - 100.0 mg
2	pH	7.45	7.47	7.36	7.20	7.14	7.97	5.5 - 9.0 pH
3	BOD	6.53	7.24	9.51	9.05	8.78	11.58	0 - 30.0 mg/l
4	COD	79.28	79.45	78.24	76.70	76.05	85.03	0 - 250.0 mg/l