JUSL/JRD/ENV/2024-25/03

Date: 31.05.2024

To

Deputy Director General of Forests (C)
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, 2023 to March, 2024.

Ref: 1. Environment Clearance vide Letter No . IA-J-11011/110/2018-IA.II(I), dated 24.05.2019 for capacity expansion of Hot Strip Mill from 1.6 MTPA to 3.2 MTPA and new installation of 0.3 MTPA Cold Rolling Mill.

2. Environment Clearance vide Letter No. IA-J-11011/110/2018-IA.II(I), dated 25.05.2018 for 1.6 MTPA Hot Strip Mill along with plate finishing shop.

Dear Sir,

With reference to the above Environment Clearances, please find enclosed herewith the half yearly compliance for the stipulated conditions for the period from October, 2023 to March, 2024.

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

Thanking You,

Yours faithfully,
For **Jindal United Steel Limited**

Arun Kumar Tripathi
(Vice President - HSM)

GOVT. OF INDIA
MoEF & CC Integrated
31 MAY 2024
RECEIVED

Enc: As Above

CC:

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

M/S. JINDAL UNITED STEEL LIMITED

HALF YEARLY EC COMPLIANCE REPORT

OCTOBER, 2023 TO MARCH, 2024

M/s. JINDAL UNITED STEEL LIMITED
Kalinganagar Industrial Complex, Duburi, Dist. Jajpur - 755026, Orissa, India
Tel: +91 06726 266260
Fax: +91 06726 266006
E-mail: info@jusl.in

Status of Compliance report of Environment Clearance conditions for capacity expansion of Hot Strip Mill from 1.6 MTPA to 3.2 MTPA and new installation of 0.3 MTPA Cold Rolling Mill.

Ref: IA-J-11011/110/2018-IA.II(I), dated 24.05.2019

A. Specific conditions

Sl .no.	EC condition	Compliance status
i.	The CER shall be completed within a time frame of three years.	Activities under CER are being undertaken in line with the commencement of the expansion project. Detailed report is enclosed as **Annexure – I.**
Ii	Action plan for rainwater harvesting measures at plant site shall be submitted to the Regional office indicating quantity of rain water to be harvest from the roof tops and storm water drains to recharge the ground water and also to use for the various activities at the project site to conserve fresh water and reduce the water requirement from other sources.	The rain water harvesting system with water recirculation system has been installed.
Iii	The company shall establish separate environmental management cell for JSL & JCL respectively	The company has already established Environment Management cell for JSL & JCL with qualified staffs.
Iv	Greenbelt shall be in area of 10 ha. Outside the factory premises and the implementation status shall be reported to Regional Office of MoEF&CC.	We have carried out avenue plantation of 8000 nos. of saplings at nearby villages i.e. Nuagaon, Balungabandi, Satabainsia, Kharadi, Mangalapur villages covering an area of 12 Acres.

B. General condition

Sl .no.	EC condition	Compliance status
I . Statutory compliance:		
i.	The project proponent shall obtain Consent to Establish / Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State Pollution Control Board / Committee.	Consent to Establish (CTE) for expansion of Hot Strip Mill from 1.6 MTPA to 3.2 MTPA and installation of 0.3 MTPA Cold Rolling Mill (CRM) vide SPCB letter No. 7663/IND-II-CTE-6231, dated. 19.07.2019. The unit has obtained Consent to Operate for 1.6 MTPA HSM and 0.3 MTPA CRM valid up to 31.03.2025. The unit has also obtained Consent to Operate for expansion of HSM from 1.6 MTPA to 3.2 MTPA valid up to 31.03.2025.

Sl .no.	EC condition	Compliance status
ii.	The project proponent shall obtain the necessary permission from the Central Ground Water Authority, in case of drawl of ground water / from the competent authority concerned in case of drawl of surface water required for the project.	There is no proposal for drawl / usage of ground water for this expansion project. The water required for process is fulfilled by Jindal Stainless Limited (JSL) which is sourced from River Brahmani for which JSL has obtained permission from water resource Deptt. Odisha.
iii.	The project proponent shall obtain authorization under the Hazardous and other Waste Management Rules, 2016 as amended from time to time.	The plant has already obtained authorization under Hazardous and other Waste Management Rules, 2016 and amended there-off for present facilities from SPCB, Odisha, which is valid till 31.03.2025. For any additional generation post expansion, we shall obtain necessary authorization from SPCB, Odisha.
II. Air quality monitoring and preservation:		
i.	The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R 277 (E) dated 31st March 2012 (applicable to IF/EAF) as amended from time to time; S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.	The continuous emission monitoring system (CEMS) has been installed at RHF 1 & 2, Shot Blaster of PFS and Hot Pickling Line and data is being transmitted to both SPCB/CPCB servers.
ii.	The project shall monitor fugitive emission in the plant premises at least once in every quarter through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.	Fugitive emission monitoring is being carried out monthly through NABL accredited Laboratory.
iii.	The project proponent shall install system carryout Continuous Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM_{10} and $PM_{2.5}$ in reference to PM emission, and SO_2 and NOx in reference to SO_2 and NOx emissions) within and outside the plant area (at least four locations one within and three outside the plant area at an angle of 120^{o} each), covering upwind and downwind directions.	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. Parameters like PM_{10}, $PM_{2.5}$, SO2, NOx and CO in ambient air are being monitored. However, 1 no. of dedicated CAAQMS has also been newly installed at M/s. Jindal United

Sl .no.	EC condition	Compliance status
		Steel Limited for monitor of parameters like PM_{10}, $PM_{2.5}$, SO_2, NOx and CO in ambient air.
iv.	The project proponent shall submit monthly summary report of continuous stack emission and air quality monitoring and results of manual stack monitoring and manual monitoring of air quality / fugitive emissions to Regional office of MoEF&CC, Zonal office of CPCB and regional office of SPCB along with six monthly monitoring report.	Manual monitoring of Ambient Air quality / stack monitoring is being carried out periodical basis. The monitoring report is annexed as **Appendix – A**. The monthly summary summery report of Continuous Ambient Air Quality monitoring data is annexed as **Appendix – B.**
v.	Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust form all vulnerable sources.	Bag filters have been installed at PFS and HPL provided to arrest fugitive dust emission.
vi.	The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.	Mechanized bag cleaning facilities has been provided for maintenance of bags.
vii.	Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads, shop floors, roofs regularly	Mechanical sweepers have been engaged for road and shop floor cleaning.
viii.	Recycle and reuse iron ore fines, coal and coke fines, lime fines collected in the pollution control devices and vacuum cleaning devices in the process after briquetting / agglomeration.	The raw material for Hot Strip Mill is SMS slab which is received from JSL. The mill scale generated prom the process is being reused for making of Briquette Plant for further reuse in Ferro Alloys plant of JSL.
ix.	The project proponent shall use leak proof trucks / dumpers carrying coal and other raw materials and cover them with tarpaulin.	SMS Slab is the main raw material used in Hot Strip Mill, which will be received from JSL through Slab Transfer Car.
x.	The project proponent shall provide covered sheds raw materials like scrap and sponge iron , lump ore, coke , coal, etc.	SMS Slab is the main raw material used in Hot Strip Mill, which will be received from JSL through Slab Transfer Car.
xi.	The project proponent shall provide primary and secondary fume extraction system at all melting furnaces.	Fume extraction system has been installed at both existing and new Reheating Furnace.
xii.	Design the ventilation system for adequate air changes as per ACGIH document for all tunnels, motor houses, Oil Cellars.	All the ventilation system installed at shop floor are as per guideline.
III. Water quality monitoring and preservation		
i.	The project proponent shall install 24x7 continuous effluent monitoring system with	The continuous effluent monitoring system has been installed in the ETP of

Sl .no.	EC condition	Compliance status
	respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R 277 (E) dated 31st March 2012 (applicable to IF/EAF) as amended from time to time; S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.	HPL and data is being transmitted to both SPCB/CPCB servers. The online monitoring report is annexed as **Appendix – B.**
ii.	The project proponent shall monitor regularly ground water quality at least twice a year (pre and post monsoon) at sufficient numbers of piezometers / sampling wells in the plant and adjacent areas through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.	At present the unit is not drawing ground water for plant usage. However, ground water quality in nearby plant area is being monitored bi-monthly by NABL accredited third party Laboratory. Report is annexed as **Appendix – A.**
iii.	The project proponent shall submit monthly summary report of continuous effluent monitoring and results of manual effluent testing and manual monitoring of ground water to Regional office of MoEF&CC, Zonal office of CPCB and regional office of SPCB along with six monthly monitoring report.	The online data of effluent quality monitoring system is annexed as **Appendix – B**. The manual testing report of effluent and ground water is annexed as **Appendix-A.**
iv.	Adhere to "Zero Liquid Discharge"	Zero Liquid Discharge for effluent is being strictly followed.
v.	Sewage Treatment Plant shall be provided for treatment of domestic waste water to meet the prescribed standards.	*The Sewage generated is being stored in soak pit and further lifted to STP having capacity of 35m^3/day for treatment the sewage water generated from the plant.*
vi.	The project proponent shall provide the ETP for treatment of effluents of Rolling Mills to meet the standards G.S.R 277 (E) dated 31st March 2012 (applicable to IF/EAF) as amended from time to time.	An ETP of capacity 350m3/day has been installed for treatment of effluent generated from Rolling Mill.
vii.	Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run-off.	The raw material for Hot Strip Mill is Slab which is stored under shed. However, separate garland drain and storm water drains has been constructed for flow of surface runoff during monsoon.
viii.	The project proponent shall practice rain water harvesting to maximum possible extent.	Rain water harvesting system with provision of recirculation system to raw water reservoir has been constructed.

Sl .no.	EC condition	Compliance status
ix.	The project proponent shall make efforts to minimize water consumption in the steel plant complex by segregation of used water, practicing cascade use and by recycling treated water.	The waste water generated from process is being treated in WTP and reused in the process.
IV. Noise monitoring and prevention		
i.	Noise level shall be carried as per the prescribed guidelines and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six- monthly compliance.	The noise level monitoring is carried out on periodically. The monitoring report is annexed as **Appendix – A.**
ii.	The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time.	The noise level is meeting the prescribed standards.
V. Energy Conservation Measures		
i.	The project proponent shall provide waste heat recovery system (pre-heating of combustion air) at the flue gases of reheating furnaces.	Pre-heating of combustion air system has been installed at both the existing and new reheating furnaces.
ii.	Practice hot charging of slabs and billets/blooms as far as possible.	As per present practice of charging of hot slabs to reheating furnace is being carried out as far as possible.
iii.	Ensure installation of regenerative type burners on all furnaces.	The Reheating Furnace installed is walking beam reheating furnace with recuperator. Recuperator is used in the reheating furnaces as a waste heat recovery unit to realize high thermal efficiency and energy conservation. The recovered waste heat is used to preheat the combustion air, which is then fed to a burner.
iv.	Provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around the project area and maintain the same regularly.	Installation of solar power generation on roof tops of buildings is under process.
V	Provide LED lights in their office and residential areas.	LED lights have been provided at all office and residential areas as part of energy conservation measures.
VI. Waste Management		
i.	Used refractories shall be recycled a far as possible.	Used refectories generated are being reused in SMS of JSL as far as possible.
ii.	Oily scum and metallic sludge recovered from rolling mills of ETP shall be mixed, dried and briquetted and reused melting furnaces.	Metallic sludge recovered from rolling mill of ETP is being reused is Briquette Plant for further reuse in Ferro Alloys Plant of JSL.

Sl .no.	EC condition	Compliance status
iii.	100% utilization of fly ash shall be assured. All the fly ash shall be provided to cement and brick manufactures for further utilization and Memorandum of Understanding in this regard shall be submitted to the Ministry's Regional Office.	CPP is not covered under JUSL.
iv.	The waste oil, grease and other hazardous wastes like acidic sludge from pickling, galvanising, chrome plating mills etc. shall be disposed as per the Hazardous & Other Waste (Management & Transboundary Movement) Rules, 2016.	The waste oil generated is being disposed to authorized recycler and the ETP sludge of HPL is being disposed to CHWSTDF as per the Hazardous & Other Waste (Management & Transboundary Movement) Rules, 2016.
VII. Green Belt		
i.	Green belt shall be developed in an area equal to 33% of the plant area with a native tree species in accordance with CPCB guideline. The greenbelt shall inter alia cover the entire periphery of the plant.	We have carried out avenue plantation of 8000 nos. of saplings at nearby villages i.e. Nuagaon, Balungabandi, Satabainsia, Kharadi, Mangalapur villages covering an area of 12 Acres. Further an extensive plantation programme is going on in plant premises.
ii.	The project proponent shall prepare GHG emission inventory for the plant and shall submit the programme for reduction of the same including carbon sequestration including plantation.	GHG emissions inventory for the plant has been carried out for the FY 2023-24. GHG Emission Intensity (TCO_2e/T) 2023-24 — Scope 1: 0.10; Scope 2: 0.12 JUSL has taken various Decarbonization programs. The detail report is enclosed as **Annexure – II.**
VIII. Public hearing and Human health issues		
i.	Emergency Preparedness plan based on Hazard Identification and Risk Management (HIRA) and Disaster Management Plan shall be implemented.	HIRA is being done based on Hazard involved in the process and activities, which is to be carried out during operation and accordingly Onsite Emergency Plan is also updated.
ii.	The project proponent shall carryout heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protective Equipment (PPE) as per the norms of Factory Act.	Defined PPE matrix is well in place and Personal Protective Equipment (PPE) have been provided to the workers who are working in high temperature work zone as per the standards stated as stipulated in BIS(Bureau of Indian Standard)
iii.	Provision shall be made for housing	There is no provision of staying of

Sl .no.	EC condition	Compliance status
	construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical healthcare, crèche etc. The housing may be in the form of temporary structures to be removed after completion of the project.	construction labour within the plant site. The construction labours are staying outside the plant premises with their own / contractor arrangements.
iv.	Occupation Health surveillance of the workers shall be done regular basis and records maintained as per the Factory Act.	Periodical health checkup of all the workers are being carried out on periodical basis as per the Factory Act .
IX. Corporate Environment Responsibility		
i.	The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 1st May 2018, as applicable, regarding Corporate Environment Responsibility.	**Noted**
ii.	The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements / deviation / violation of the environmental / forest / wildlife norms / conditions. The company shall have defined system for reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the Board Resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.	The company is having a well laid down QEOHS poicy dully approved by the Director. The copy of the same is attached as **Annexure – III**.
iii.	A separate Environment Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior executive, who will directly to the head of the organization	A separate Environment cell has been setup with skilled personal to take care of Environment issues of plant. The Head of Environment Department directly reports to Head of the organization.
iv.	Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be dully approved by competent authorities. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry /	**Noted**

Sl .no.	EC condition	Compliance status
	Regional Office along with the six-monthly compliance report.	
v.	Self –environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.	Self environmental audit is being conducted regularly and any point observed is being complied. Third Party Audit for the year 2022-23 has been completed and reports were submitted to MOEF&CC.
vi.	All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the plants shall be implemented.	All the recommendations made in the Charter on Corporate Responsibility for Environment Protection is being implemented in the plant.
X. Miscellaneous		
i.	The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising in at least in two local news papers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.	Advertisement on grant of Environment Clearance (EC) has been published in two local news papers within seven days of grant of EC. Copy of the same has been submitted to your good office on 02.06.2019.
ii.	The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the day of receipt.	The copies of the environmental clearance have been submitted to the Heads of local bodies, Panchayats.
iii.	The project proponent shall upload the status of compliance of the stipulated environmental clearance conditions including results of monitored data on their website and update the same on half-yearly basis.	The Compliance status of the environment clearance conditions and monitoring data is being uploaded on the website and also updated in half yearly basis.
iv.	The project proponent shall monitor the criteria pollutant level namely; PM_{10}, SO_2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.	Four 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. Parameters like PM_{10}, $PM_{2.5,}$ SO2, NOx and CO in ambient air are being monitored. However, 1 no. of dedicated CAAQMS has also been newly installed at M/s. Jindal United Steel Limited for monitor of parameters like PM_{10}, $PM_{2.5,}$ SO_2, NOx and CO in ambient air.

Sl .no.	EC condition	Compliance status
v.	The project proponent shall submit six-monthly report on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environmental clearance portal.	Six-monthly compliance report of environment clearance is being uploaded on the website of MoEF&CC.
vi.	The project proponent shall submit the environmental statement for each financial year in Form-IV to the concern State Pollution Control Board under the Environment (Protection). Act 1986, as amended subsequently and put on the website of the company.	Environment Statement Report in Form – V is being submitted to SPCB, Odisha every year by 30th September. The Last report has been submitted on 28.09.2023.
vii.	The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project. i. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government. ii. The project proponent shall abide by all commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.	The unit has obtained Consent to Operate for 1.6 MTPA HSM and 0.3 MTPA CRM valid up to 31.03.2025. The unit has also obtained Consent to Operate for expansion of HSM from 1.6 MTPA to 3.2 MTPA valid up to 31.03.2025.
viii.	No further expansion or modifications in the plant shall be carried out prior approval of the Ministry of Environment, Forest and Climate Change (MoEF&CC).	**Noted**
ix.	Concealing factual data or submission of false/fabricated data may result revocation of this environmental clearance and attract action under the provision of Environment (Protection). Act 1986.	**Noted**
x.	The Ministry may revoke or suspended the clearance, if implementation of any of the above conditions is not satisfactory.	**Noted**
xi.	The Ministry reserves the right to stipulate additional conditions if found necessary. The company in a time bound manner shall implement these conditions.	**Noted**
xii.	The Regional Office of this Ministry shall monitor compliance of the stipulated	**Noted**

Sl .no.	EC condition	Compliance status
	conditions. The project authorities shall extend full co-operation to the officer(s) of the Regional office by furnishing the requisite data / information / monitoring reports.	
xiii.	The above conditions shall be enforced, inter-alia under the provision of the Water (Prevention & Control of Pollution) Act, 1974, the AIR (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject Manner.	**Noted**
xiv.	Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under the Section 16 of the National Green Tribunal Act, 2010	**Noted**

Status of compliance report environment clearance conditions of 1.6 MTPA Hot Strip Mill along with plate finishing
Ref: IA-J-11011/110/2018-1A II (I), dt. 25th May. 2018

A. SPECIFIC CONDITIONS:

S. No.	Condition	Compliance
i.	Bag filter shall be installed to control the emissions from PFS. 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.	Bag filter has been installed at shot blaster of PFS and HPL. Continuous Emission monitoring system have been installed and the online data is being transmitted to SPCB/CPCB server. No dust suppression is required as the raw material for HSM is SMS slab, which is stored under shed with concrete flooring. The entire internal road is concrete and mechanical road sweepers are deployed for road cleaning.

S. No.	Condition	Compliance
ii.	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. Effluent form Hot Strip Mill shall be treated in ETP and shall be reused. TDS in the effluent shall not be more than 2100 mg/l. The domestic waste water after treatment in STP shall be used for green belt development.	No ground water is being used in the plant. Zero discharge is being maintained for the entire plant. Effluent generate from process is being treated in ETP and the treated water is completely reused in the process itself. TDS in the effluent is well within the prescribed limit.
iii.	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.	The solid waste namely Mill scale generated form HSM is being stored on concrete floor and reused in Ferro Alloy plant of JSL.
iv.	Solid waste shall be disposed of in secured landfill designed as per the specifications of the CPCB. Mill scale from Hot Strip Mill (HSM) shall be sold to the parent company (JSL) for recycling.	Mill scale generated form HSM is being stored in designated place and reused in Ferro Alloy plant of JSL.
v.	Green belt shall be developed within and around the plant premises as per the CPCB guidelines in consultation with DFO.	Green belt is already developed in and around the plant.

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.	JUSL is strictly adhering to the stipulations made by SPCB and the State Government.
ii.	No further expansion or modifications in the plant should be carried out without prior approval of the Ministry of Environment and Forests.	**Noted**
iii.	The gaseous emissions from various process units shall conform to the load/ mass based standards notified by this Ministry on 19th May, 1993 and standards prescribed from time to time. The state board may specify more stringent standards for the relevant parameters keeping in view the nature of the industry and its size and location. At no time, the	The gaseous emissions from various process units are being monitored by NABL accredited third party Laboratory. The analysis reports are being submitted to SPCB and MOEF regularly. On-line continuous emission monitoring systems have been installed and online

S. No.	Condition	Compliance
	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.	data is being transmitted to SPCB/CPCB server.
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.	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. Parameters like PM_{10}, $PM_{2.5}$, SO2, NOx and CO in ambient air are being monitored. However, 1 no. of dedicated CAAQMS has also been installed at M/s. Jindal United Steel Limited for monitor of parameters like PM_{10}, $PM_{2.5}$, SO_2, NOx and CO in ambient air. Both Stack Analysis report & ambient air quality is provided as ***Appendix-A***.
v.	In-plant control measures for checking fugitive emissions from all the vulnerable sources of Hot Strip Mill area, shall also be provide. Fugitive emissions shall be controlled, regularly monitored and records maintained.	Fugitive emission monitoring is being carried out on regular basis and reports are submitted regularly.
vi.	Industrial waste water shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May, 1993 and 31st December, 1993 or as amended from time to time. The treated waste water shall be utilized for plantation purpose.	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. An ETP has been installed for treatment of process water and the treated water is being reutilized in the process to reduce the fresh water consumptions.
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.	Adequate measures have been taken to keep noise level within 85 dB(A) in and around plant area. Silencers, Acoustic Enclosures are provided to control noises, in various areas of the Plant. The Ambient Noise levels are conforming

S. No.	Condition	Compliance
		to the standards prescribed under EPA Rules, 1989. Noise monitoring result are enclosed as ***Appendix-A.***
viii.	The company shall develop surface water harvesting structures to harvest the rain water for utilization in the lean season besides recharging the ground water table.	The rain water harvesting system with water recirculation system has been installed.
ix.	Occupational Health Surveillance of the workers shall be done on a regular basis and record maintained as per the Factories Act.	Occupational health surveillance of the workers is being carried out on a regular basis and records are being maintained as per the Factories Act.
x.	Recommendations made in the CREP guidelines issued for the steel plants shall be implemented.	CREP guidelines are being followed.
xi.	The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/ EMP report for Hot Strip Mill.	The Plant has taken all the environmental protection measures and safeguards recommended in the EIA/EMP report. The details are enclosed as - **Annexure I.**
xii.	The project authorities shall utilize Rs. 4 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.	We have already incurred more than Rs. 6 crores for environmental pollution control measures in Hot Strip Mill.
xiii.	The regional office of the Ministry at Bhubaneswar/ CPCB/ OPCB will monitor the stipulated conditions. A six monthly compliance report and the monitored data along with statistical interpretation shall be submitted to them regularly.	Six monthly compliance report and monitored data is being submitted to the Ministry regularly.
xiv.	The project proponent shall inform to the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the OPCB/ Committee and may also be seen at Website of the Ministry Of Environment and Forests at	Advertisement on grant of Environment Clearance (EC) has been published in two local news papers within seven days of grant of EC.

S. No.	Condition	Compliance
	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..	
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.	The unit has obtained Consent to Operate for 1.6 MTPA HSM and 0.3 MTPA CRM valid up to 31.03.2025. The unit has also obtained Consent to Operate for expansion of HSM from 1.6 MTPA to 3.2 MTPA valid up to 31.03.2025.
xvi.	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.	**Noted.**
xvii.	The Ministry reserves the right to stipulate additional conditions if found necessary. The company in a time bound manner will implement these conditions	**Noted.**
xviii.	The above conditions will be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous Waste (Management & Handling) Rules, 2016 and the Public (Insurance) Liability Act, 1991 along with their amendments and rules.	All the relevant environmental acts are being followed.

LIST OF ENCLOSURES

Sl. No.	Description	Annexure /Appendix
1.	CER compliance report	Annexure - I
2.	Report on Decarbonisation programme	Annexure - II
3.	QEOHS Policy	Annexure - III
4.	Monitoring Report	Appendix – A
5.	Online Monitoring Report	Appendix – B

.

CER activities - JUSL

DETAILS OF THE COST TO BE INCURRED UNDER CER WITH REGARD TO PUBLIC HEARING ISSUES					
CER ACTIVITIES (PH ISSUES)	**0-12 months**	**13 – 22 months**	**TOTAL**	**Status as on date**	**Amount spent (Rs. In Lakh)**
	(Rs. in Lakh)				
Local Livelihood Programme 3 Blocks (Danagadi, Sukinda& Jajpur Road).	85	80	165.00	**Towards women empowerment** ➢ Promoted 200 women self help groups of 30 nos, villages from Danagadi and Sukinda Blocks in which 3240 women members are associated with our inhouse team and improving their socio-economic status through various skill development training and bank credit facilitation. ➢ Establishment of ASMITA production center, Sahaja Sanitary Napkin Making unit, Boutique centers at Danagadi and Sukinda Blocks. **Towards farmers development program** Assistance provided to more than 1500 farmer directly and more than 20,000 nos. farmers through OLM in 4 blocks of Jajpur district. **Towards community health care.** Cataract operation of 475 senior citizen, club foot treatment of 25 children at Jajpur Dist. Awareness program for TB, long disease, malaria and HIV/AIDS is conducted in 5 villages of Danagadi Block	140

				Towards education and skill development ➢ Facilitating trained teachers for giving training on computer education, retail management, computer hardware, networking, electrical etc. to 4000 youths of Kalinganagar**.** ➢ Providing assistance for full time football coaching to 05 tribal children of Danagadi and Sukinda at New Delhi.	
Local Infrastructure Development Programme Construction of 4 Community Centers located within 3 Blocks of Danagadi, Sukinda & Jajpur Road	26	26	52.00	Community center construction at Tikara and Damodarpur village of Danagadi block, Mangalpur and Dhuligarh has been completed.	59
Drinking Water Pipeline, pump house and Borewell with Solar Power at Rampillo, Manpur Brahman Sahi, Pingal & Pankapal Sasan	58	-	58.00	Pipe line laying work with pump house and bore well with electrification has been completed at Manpur, Sulia, Pingal, Bengapatia and Kantipur village. Other villages are developed through Government Scheme under BASUDHA Yojana.	45
Cleaning of Ponds in 22 villages in blocks of Danagadi, Sukinda & Jajpur Road	19	-	19.00	Pond cleaning work completed at 10 nos of villages namely Marutikar, Mantira, Jajpur road, Dala, Chorda etc.	20
Community Environmental Protection Programme **-** Air and Water Monitoring in Buffer Zone especially in Vyasanagar Municipality Area & New Market of Jajpur Road Block and villages of Nuagaon, Jakhpura, Solei and Danagadi	40	-	40.00	Third Party monitoring in buffer zone is being conducted periodically. However, a detailed comprehensive study on air and water quality has been conducted in 2020 as a part of EMP study.	20

Water Sprinkling in surrounding areas	12	-	12.00	Water Sprinkling being carried out at Manpur village, common corridor of JSL boundary. An amount of Rs. 5 Lakhs has been given to KNDC for water sprinkling and other development works.	10
Education Providing Tuition Teachers & Salary teachers for specific requirements of schools in nearby villages like Kumbhiragadia, Danagadi and Jakhpura located within the blocks of Danagadi and Jajpur Road	5	5	10	Tuition teacher along with salary given to the schools available at Danagadi and Trijanga	10
Boundary Wall for Nodal Upper Primary School at Trijanga	9.5	-	9.50	Boundary Wall for Nodal Upper Primary School at Trijanga completed.	10
Health Up gradation and replacement of Medical equipment at CHC of Danagadi	40	-	40.00	Up gradation and replacement of Medical equipment at CHC of Danagadi is completed.	34
Provision of a DG Set & Beds in PHC OF Pachhikot	5.5	-	5.50	Provision of a DG Set & Beds in PHC OF Pachhikot and korei is completed.	11
Health Camps within blocks of Danagadi and Jajpur Road.	25	-	25.00	Health Camps within block of Danagadi has been completed twice.	20
Local Skill 7 Vocational Training Programme Provision of local skill and vocational training programme in nearby villages like Solei and Danagadi within the block of Danagadi	10	5	15.00	Provision of local skill and vocational training progrmme is being conducted in nearby villages periodically.	12
Avenue/Urban Plantation Urban Plantation within the blocks of Danagadi & Jajpur Road	10	10	20.00	Urban road side Plantation of 8000 nos. of tree at villages Nuagaon, Mangalpur, Kharadi, Balungabandi, Satabainsia	18

Free Sapling to local villages within the blocks of Danagadi & Jajpur Road	3	2	5.00	10000 nos. of free sapling have been provided to Forest Department	5
Total			**476**		**414**

DETAILS OF THE COST TO BE INCURRED UNDER CER WITH REGARD TO NEEDS ASSESSMENT

CER ACTIVITIES (PH ISSUES)	**0-12 months**	**13 – 22 months**	**TOTAL**	**Status as on date**	
	(Rs. in Lakh)				
Local Skill & Vocational Training Programme Vocational and Skill Development Training for women and girls in Mangobindapur, Saranapur, Danagadi and Kacherigan.	6	4	10.00	Vocational and Skill Development Training for women and girls in near by village is being regularly conducted, Entrepreneurship development Programme in Danagadi.	9
Local Infrastructure Development Programme Improvement in Road Conditions in consultation with local administration in villages of Sorei and Mangobindapur	12	12	24.00	Road repairing work is completed to Mangobindpur to Bengapatia at stretch of 500 mt. Concrete road is completed at Pankhpal.	20
Additional Issues addressed under CER					
* Construction of Shiva Temple(Bagei Biswswar temple) in Village Balungabandi	32	*	32	Construction of Shiva Temple in balungabandi Village has been completed	**32**
* Jagya Mandap at Nohuranipasi	6	*	6	Jagya Mandap at Nohuranipasi work Completed	**6**

*Danagadi Saraswati Sisu Mandir Class room and Toilet	10	*	10	Classroom and toilet of Sisumandir at Danagadi has been completed.	**10**
*Hudisahi temple	5	*	5	Thakursala at hudisahi trijanga colony has been completed.	**5**
*NUAGAON sai Temple	7	*	7	Sai temple at nuagaon has been completed	**7**
Brahmakumari Ashram at Patia, Bhubaneswar	1	*	1	Development work carried out at patia brahmakumari Ashram	**1**
Batamangala Mandap at Puri	15	*	15	Construction of Mandap at batamangala, Puri has been completed	**15**
Saraswati Sisu Mandir Classroom at toilet at Mantira	15	*	15	Construction of classroom and toilet at Sisu mandir at mantira is in progress.	**15**
Classroom at Marutikar primary School	8	*	8	Construction of classroom at Marutikar Primary School is in progress	**10**
Brahmakumari Ashram at Anandpur	10	*	10	Construction of brahmakumari Ashram at Anandpur has been proposed, Po to be issued	**8**

Khudurukuni Puja Hall at Ostapal	5	*	5	Construction of khudurukuni Puja Hall at Ostapal is under progress.	**7**
Development at Jakhapura Jagannath Temple	11	*	11	Construction of office and dining hall at jagannath temple of Jakhapura is under progress.	**20**
Development at Mantira Jagannath Temple	8	*	8	Colouring of Jagannath temple at Mantira is under progress.	**8**
Temple at Khandurai	5	*	5	Construction of Khadurai temple at asanabahali is under progress.	**5**
Puja Mandap at Danagadi	10	*	10	Construction of Puja mandap at Danagadi has been completed	**12**
Total			**34.00**		**190.00**

Annexure - II

S No	Description of Project	Carbon Abatement Potential (tCO2/Year)
1	Hot Charging of Slabs in RHF for fuel saving	963
2	8 MWp Rooftop Solar	7463.52
3	1 MW Rooftop Solar Extension_Phase II	11195.28
4	Scope of VFD in RH Furnace Combustion air fan	303.88
5	Revamping of Chiller Plant	163.3
	Total	**20088.98**

QUALITY, ENVIRONMENT, OCCUPATIONAL HEALTH & SAFETY POLICY

Jindal United Steel Limited aims to attain product leadership in terms of high quality products, cost competitiveness, delivery and customer services through state of the art processing facilities, capability building, innovative stain-less solutions and maintaining reliable relationships with all stakeholders with a commitment to maintain environment friendly, safe, healthy and sustainable working conditions in all its operations.

We are committed to:

- Meeting and exceeding customer needs and expectations by offering quality products and prompt services.
- Comply with all applicable legal and other specific requirements to which organization subscribes.
- Environmental protection and prevention of pollution by reducing emissions, sustainable and efficient usage of natural resources.
- Prevention of injury and ill health by establishing safe working condition and adopting safe working practices as identified through occupational health & safety risk assessment.
- Review this policy periodically to ensure relevance, appropriateness and continual improvement of integrated management system with involvement of all interested parties as applicable.
- Consultation and participation of workers and their representatives at all applicable levels and functions.

Date: 1st March 2022

(Deepak Agrawal)
Unit Head

Environmental Monitoring Report for the Period October-2023 to March-2024

INDEX

A. Stack Analysis

B. Ambient Air Quality

C. Noise Monitoring

D. Fugitive Air Emission

A. Stack Analysis:

Particulate Matter (PM):

Monitoring Results of Stack Analysis								
Sl. No.	Sampling Stations	Monthly Average Concentration of Particulate Matter (mg/Nm^3)						
		Oct.-23	Nov.-23	Dec.-23	Jan.-23	Feb. -23	Mar. -23	Permissible limit
1	HSM (Re – Heating Furnace)	18.2	18.8	20.8	18.6	20.0	24.7	**100**

Sulphur Dioxide (SO2):

Monitoring Results of Stack Analysis								
Sl. No.	Sampling Stations	Monthly Average Concentration of Sulphur Dioxide (mg/Nm^3)						
		Oct.-23	Nov.-23	Dec.-23	Jan.-23	Feb. -23	Mar. -23	Permissible limit
1	HSM (Re – Heating Furnace)	23.5	24.3	18.4	12.2	20.2	26.7	-

Oxide of Nitrogen (NOx):

Monitoring Results of Stack Analysis								
Sl. No.	Sampling Stations	Monthly Average Concentration of Oxide of Nitrogen (mg/Nm^3)						
		Oct.-23	Nov.-23	Dec.-23	Jan.-23	Feb. -23	Mar. -23	Permissible limit
1	HSM (Re – Heating Furnace)	19.6	20.2	23.7	24.6	16.8	18.8	-

B. Ambient Air Monitoring Report:

AAQ near Nursery

Sl. No.	Parameters	Monthly Average concentration						
		Oct.-23	Nov.-23	Dec.-23	Jan.-23	Feb. - 23	Mar. - 23	Permissible limit
1	PM_{10} µg/m^3	73.6	71.8	73.4	71.7	70.2	73.8	100(24 Hrs)
2	$PM_{2.5}$ µg/m^3	26.1	25.4	25.6	23.2	24.3	26.2	60 (24 Hrs)
3	SO_2 µg/m^3	17.4	17.0	16.8	29.1	29.3	25.8	80(24 Hrs)
4	NO_x µg/m^3	16.1	15.8	15.4	13.4	13.7	13.4	80(24 Hrs)
NB: Parameters such as Lead, Ozone, Ammonia, Benzene, Benzopyrene, Arsenic & Nickel found to be below detection limit (BDL).								

AAQ near Security Barrack

Sl. No.	Parameters	Monthly Average concentration						
		Oct.-23	Nov.-23	Dec.-23	Jan.-23	Feb. - 23	Mar. - 23	Permissible limit
1	PM_{10} µg/m^3	81.7	82.4	80.8	77.4	72.6	84.6	100(24 Hrs)
2	$PM_{2.5}$ µg/m^3	29.8	30.8	28.6	28.4	21.3	32.2	60 (24 Hrs)
3	SO_2 µg/m^3	26.3	27.4	25.4	27.2	27.6	29.2	80(24 Hrs)
4	NO_x µg/m^3	20.2	21.6	20.2	25.3	25.4	25.4	80(24 Hrs)
NB: Parameters such as Lead, Ozone, Ammonia, Benzene, Benzopyrene, Arsenic & Nickel found to be below detection limit (BDL).								

AAQ near PFS Scrap Yard

Sl. No.	Parameters	Monthly Average concentration						
		Oct.-23	Nov.-23	Dec.-23	Jan.-23	Feb. - 23	Mar. - 23	Permissible limit
1	PM_{10} µg/m^3	79.8	80.2	79.3	86.1	79.4	78.2	100(24 Hrs)
2	$PM_{2.5}$ µg/m^3	28.8	29.2	28.4	30.2	35.6	28.6	60 (24 Hrs)
3	SO_2 µg/m^3	22.4	24.4	24.6	26.4	22.8	27.4	80(24 Hrs)
4	NO_x µg/m^3	19.8	19.8	19.4	20.6	18.8	14.6	80(24 Hrs)
NB: Parameters such as Lead, Ozone, Ammonia, Benzene, Benzopyrene, Arsenic & Nickel found to be below detection limit (BDL).								

AAQ near HSM Utility (Store-2)

Sl. No.	Parameters	Monthly Average concentration						
		Oct.-23	Nov.-23	Dec.-23	Jan.-23	Feb. - 23	Mar. - 23	Permissible limit
1	PM_{10} µg/m^3	74.6	74.2	74.5	79.8	75.8	65.5	100(24 Hrs)
2	$PM_{2.5}$ µg/m^3	26.7	26.5	25.6	28.2	32.2	32.0	60 (24 Hrs)
3	SO_2 µg/m^3	19.7	19.6	19.1	20.4	20.2	20.8	80(24 Hrs)
4	NO_x µg/m^3	18.6	18.4	18.8	19.6	15.6	12.2	80(24 Hrs)
NB: Parameters such as Lead, Ozone, Ammonia, Benzene, Benzopyrene, Arsenic & Nickel found to be below detection limit (BDL).								

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						
		Oct.-23	Nov.-23	Dec.-23	Jan.-23	Feb. -23	Mar. -23	Permissible limit
		DAY TIME						
1.	At Nursery	67.3	68.2	68.8	68.4	70.0	69.4	75 dB(A)
2.	At Security Barrack	71.3	72.2	70.6	72.6	72.0	73.5	
3.	At PFS Scrap Yard	72.4	73.8	72.7	73.8	73.0	75.0	
4.	Near HSM Utility Store-2	68.4	68.2	67.3	69.4	68.0	70.8	
		NIGHT TIME						
1.	At Nursery	54.4	54.2	54.0	55.6	56.0	56.8	70 dB(A)
2.	At Security Barrack	59.2	58.8	56.4	58.2	56.0	57.4	
3.	At PFS Scrap Yard	53.7	54.2	52.3	54.6	55.0	55.2	
4.	Near HSM Utility Store-2	54.8	54.3	53.4	52.9	52.0	54.6	

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))						
		Oct.-23	Nov.-23	Dec.-23	Jan.-23	Feb. -23	Mar. -23	Permissible limit
1	Near Roughing Mill	77.3	77.0	77.2	79.2	78.4	78.8	85 dB(A)
2	Near Re heating Furnace	77.8	78.4	78.1	79.4	79.8	79.2	
3	Near PFS area	78.9	79.5	78.9	78.7	79.0	79.0	
4	Near Adm. office	76.3	76.2	75.8	79.5	80.7	79.4	
5	Near Pump house	74.1	74.6	75.2	77.8	78.2	78.5	

D. Fugitive air Emission

Monitoring Results of Fugitive Air Emission								
Sl. No.	Sampling Stations	Concentration of Particulate Matter Below 10 micron as PM_{10} (µg/m^3)						
		Oct.-23	Nov.-23	Dec.-23	Jan.-23	Feb. -23	Mar. -23	Permissible limits
1	Near PFA Entry of HSM	748.6	776.1	775.6	638.8	675.2	724.4	-
2	Near Re-Heating Furnace area of HSM	721.9	712.6	714.5	697.2	708.8	634.8	

Appendix - B

Online Monitoring Report for the Period

October - 2023 to March-2024

INDEX

A. Continuous Ambient Air Quality Monitoring Report

B. Continuous Emission Monitoring Report

C. Effluent Quality Monitoring Report

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

Location - Near Nursery

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

Location - Near Security Barrack

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

Location - Near CPP

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

Location - Near Tata Corner

Sl. No.	Parameters	Monthly Average concentration						
		Oct'23	Nov'23	Dec'23	Jan'24	Feb'24	March'24	Permissible limits as per SPCB
1	PM_{10} (µg/m^3)	73.99	62.17	44.30	49.60	72.03	59.91	100(24 Hrs)
2	$PM_{2.5}$ (µg/m^3)	43.59	52.23	12.06	14.26	21.45	21.75	60 (24 Hrs)
3	SO_2 (µg/m^3)	35.06	36.95	43.38	37.25	39.05	40.42	80(24 Hrs)
4	NO_x(µg/m^3)	11.07	11.00	10.17	11.18	11.18	11.15	80(24 Hrs)
5	CO (µg/m^3)	0.40	0.47	0.50	0.66	0.45	0.36	02 (08 Hrs)

Location – Near PFS Scrap yard

Sl. No.	Parameters	Monthly Average concentration						
		Oct'23	Nov'23	Dec'23	Jan'24	Feb'24	March'24	Permissible limits as per SPCB
1	PM_{10} (µg/m³)	29.53	72.98	79.49	64.42	96.18	69.86	100(24 Hrs)
2	$PM_{2.5}$ (µg/m³)	27.85	54.17	19.82	25.24	34.36	39.24	60 (24 Hrs)
3	SO_2 (µg/m³)	14.10	14.11	14.28	14.15	14.32	14.26	80(24 Hrs)
4	NO_x(µg/m³)	27.25	30.15	37.51	10.05	7.80	8.59	80(24 Hrs)
5	CO (µg/m³)	1.00	1.03	1.11	1.39	0.74	0.48	02 (08 Hrs)

B. Continuous Emission Monitoring System (CEMS) report:

Sl. No.	Sampling Stations	Parameters	Monthly Average Concentration of PM, SO_2 & NO_x (mg/Nm³)						
			Oct'23	Nov'23	Dec'23	Jan'24	Feb'24	March'24	Permissible limits as per SPCB
1	RHF-1	PM	9.54	9.57	9.44	9.31	79.66	30.79	**100**
		SO_2	31.60	31.52	31.53	31.49	31.56	31.58	**1000**
		NOx	5.25	5.29	5.35	5.32	5.25	5.78	**300**
2	RHF-2	PM	-	-	-	10.75	18.23	22.15	**100**
		SO_2	-	-	-	18.52	58.68	135.7	**1000**
		NOx	-	-	-	57.49	157.51	326.73	**300**
3	Shot Blaster	PM	0.09	8.01	8.01	8.01	1.82	0.15	**100**
4	HPL Shot Blaster	PM	8.01	9.83	8.05	8.02	14.83	10.52	**100**

C. Location: HPL ETP Outlet

Sl. No.	Parameters	Monthly Average concentration						
		Oct'23	Nov'23	Dec'23	Jan'24	Feb'24	March'24	Permissible limits as per SPCB
1	**TSS**	50.93	115.68	61.89	61.07	61.24	53.78	**0 - 100.0 mg**
	pH	5.76	6.72	7.17	7.24	6.60	5.53	**5.5 - 9.0 pH**