Bhushan Power & Steel Limited
(A JSW Group Company)
Village-Thelkoloi, Post-Lapanga, Teh.-Rengali
Dist.-Sambalpur 768212, Odisha, INDIA
T+91(0)663 6636000
Website: www.jsw.in, CIN: U27100DL1999PLC108350

JSWBPSL/ENV/24-25/017
31st May'2024.

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

Subject: Six Monthly Compliance Report (From Oct'2023 to Mar'2024) on stipulated conditions of Environmental clearance for 4.5 MTPA, 3.0 MTPA,2.8 MTPA, 2.2 MTPA and 1.2 MTPA Integrated Steel Plant of M/s Bhushan Power & Steel Limited located at village Thelkoloi, Post Lapanga, Tehsil Rengali, District Sambalpur, Odisha.

Reference. -

1. EC for 4.5 MTPA letter no. IA-J-11011/40/2009-IA-II(I) Dated 13/01/2023 and amended on dated -18/07/2023.
2. EC for 3.0 MTPA letter no J-11011/40/2009-IA II(I) Dated 17.10.2012
3. EC for 2.8MTPA letter no J-11011/40/2009-IA II(I) Dated 02.04.2010
4. EC for 2.2 MTPA letter no.J-11011/372/2006-IA II (I) Dated-29.03.2007
5. EC for 1.2 MTPA letter no.J-11011/228/2003-IA II (I) Dated-12.05.2004

Dear Sir,

Inviting your kind reference on the above-mentioned subject.

As per EIA notification 2006 and its subsequent amendments, we are herewith submitting the half yearly compliance report of the environmental clearances of 4.5 MTPA, 3.0 MTPA,2.8 MTPA,2.2 MTPA and 1.2 MTPA capacity of our Integrated Steel Plant of Bhushan Power & Steel Limited located at village- Thelkoloi, Post-Lapanga, Tehsil- Rengali ,District- Sambalpur ,Odisha for the period from Oct'2023 to Mar'2024.

The copy of the compliance report has also sent in soft copy to mail id roez.bsr-mef@nic.in on dated 31.05.2024.from the mail id-akul.senapati@jsw.in.The copy of above compliance report is being uploaded on MoEF & CC website.

Hope above are in line with the statutory requirement.

Thanking You,
Yours faithfully
For **Bhushan Power & Steel Limited**

Akul Senapati
HOD -Environment 31.05.24

Copy to:1. The Zonal Officer,Central Pollution Control Board, Southern Conclave Block 502,5th &6th floors 1582 Rajdanga Main Road,Kolkata-700107
2. The Member Secretary, SPCB, Parivesh Bhawan, A/118,Nilakanthanagar,Unit-VIII, Odisha, Bhubaneswar-751012.
3. The Regional Officer,State Pollution Control Board ,Odisha,Sambalpur

COMPLIANCE STATUS TO THE ENVIRONMENT CLEARANCE

EC No.- EC23A008OR181742, File No. - IA-J-11011/40/2009-IA-II(I) Dated. 13/01/2023

EC No.-EC23A1001OR5404024A, File No. - IA-J-11011/40/2009-IA-II(IND-I) Dated.18/07/23

A. SPECIFIC CONDITIONS:

Sl. No.	Condition Description	Compliance Status
i	This Environmental clearance is granted subject to outcome of Hon'ble Supreme Court of India, Hon'ble High Court, Hon'ble NGT and any other Court of Law, if any, as may be applicable to this project.	Noted
ii	The Committee deliberated upon the latest certified compliance report of IRO, MoEF & CC as well as action plan submitted by PP with respect to the observations reported by IRO, MoEF & CC. The PP shall strictly comply with the commitments made and the action plan submitted to comply with partially complied conditions. The timely implementation must be ensured by IRO, MoEF& CC as per the Action Plan submitted by the project proponent.	We confirm to comply with partially complied conditions within the committed time. The present compliance status of the observation is enclosed as **Attachment-1**
iii	The PP shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, and risk mitigation measures relating to the project shall be implemented.	We have implemented the environmental protection measures proposed in the documents submitted to the Ministry and recommendations made in the EIA/EMP in respect of environmental management, and risk mitigation measures related to the project. Rest are under implementation.
iv	The project proponent shall utilize modern technologies for capturing of carbon emitted and shall also develop carbon sink/carbon sequestration resources capable of capturing more than emitted. The implementation report shall be submitted to the IRO,	BPSL has taken several measures to reduce Carbon di oxide emission: Energy conservation technology like PCI, TRT in blast furnace, reduction of fuel rate in BF, RB-1& 2 coal use in DRI, Replacement of conventional light with LED light, steam trap installation in steam circuit, LPG consumption reduction, Gas flaring loss reduction etc. For capturing of CO2, greenery

	MoEF&CC in this regard.	development in our plant, township is under progress.
v	The activities and the action plan proposed by the project proponent to address the issues raised during public hearing and socio-economic issues in the study area shall be completed as per the schedule presented before the Committee and as described in the EIA report in letter and spirit	We will fulfill and complete all the issues raised during the public hearing within the committed time.
vi	The project proponent shall abide by all orders and judicial pronouncements, made from time to time w.r.t. OSPCB directions under Section 31(A) of Air(P&CP) Act,1981 and 33(A) of Water(P&CP) Act, 1974 amended thereafter issued vide Letter No. 6989/IND_I_CON-4650, dated 07.05.2021, Letter No-11377/IND-I-CON-4650 dated 07/08/2021 and Letter No-17816/IND-CON-4650, dated-12/11/2021.	Complied. We have completed implementation of all the measures directed by OSPCB vide its directions under Section 31(A) of Air(P&CP) Act,1981 and 33(A) of Water(P&CP) Act, 1974 amended thereafter issued vide Letter No. 6989/IND_I_CON-4650, dated 07.05.2021, Letter No-11377/IND-I-CON-4650 dated 07/08/2021 and Letter No-17816/IND-CON-4650, dated-12/11/2021 and reported compliance to the Board.
vii	The PP shall strictly comply with the commitments made and the action plan submitted to comply with partially complied conditions reported by IRO in the certified compliance report.	We confirm to comply with partially complied conditions within the committed time. Refers to the **Attachment-1**
viii	The PP shall strictly fulfil commitments made in PH as per the action plan committed by December 2023.	We will fulfill and complete all the issues raised during public hearing within the committed time.
ix	Rejects from coal washery shall only be used either in the captive power plant (or) in the Thermal Power Plants meeting emission standards.	The rejects and midlings & tailing of coal washery is completely used in captive power plant within the plant.
x	Tailings from Iron Ore washing plant shall be dewatered in filter press and stored dry maximum for a period of 30 days inside the plant premises.	A deep bed paste thickener is installed for dewatering of water from the tailing generating from Iron Ore Beneficiation Plant. The recovered water is reused in the plant and the tailing is directly disposed in tailing pond in paste form. Tailing is not stored inside plant premises. Tailing is also utilized in Sinter plant.

xi	**Solid waste utilization**	
a	Maximum 90 days of slag storage area shall be permitted inside the plant.	Noted, the BF slag is sold to cement manufacturers and sent through rake within 30 days. EAF slag is being crushed ,high iron bearing material is being utilized in EAF, medium iron bearing material is being utilized Sinter plant and low iron bearing material is being utilized for low lying area filling and road construction.
b	PP shall install a slag crusher to convert steel slag into aggregate for use in construction industry, fine sand for use as flux in steel plant, sand in brick making and as lime in cement making.	Slag crusher plant of capacity 300 TPH have been installed. The recovered metal is recycled through SMS & Sinter Plant. The nonmetallic residue is given to brick manufacturing units and also used in-house for road making.
c	PP shall recycle/reuse 100 % solid waste generated in the plant.	Efforts are made to recycle 100% of solid waste generated in the plant. 100% of the Fly ash is utilized in brick manufacturing units and filling of abandoned sone quarry voids. ESP dust, Bag filter dust, GCP dust and ARP residue is reused for sinter making. Some part of the waste is being utilized through nearby cement plant.
d	Carbon recovery plant to recover the elemental carbon present in GCP slurries for use in Sinter plant shall be installed.	The elemental carbon present in flue dust is being utilized in Sinter plant. Utilization through Cement plant is also explored.
e	Used refractories shall be recycled as far as possible	The entire used refractory's are sold to recyclers.
xii	**Sinter Plant**	
a	Sinter cooler waste recovery system shall be installed to generate process steam or power.	Feasibility study for installation of WHR technology at existing Sinter plants have been started.
b	Equipped with MEROS technology to reduce emission of SO2, NOx and heavy metals.	Feasibility study for installation of MEROS technology at existing Sinter plants have been started
xiii	Producer gas plant shall not be established by the proponent.	Producer gas plant is not envisaged in the project.
xiv	**Coke Oven Plant**	
a	Coke Dry Quenching (CDQ) shall be installed.	We have taken offer from various technology provider. The technical discussion is going on for supply and installation of Coke Dry Quenching System in existing Recovery Type Coke Oven. It is planned to complete

		installation of the same by March 2026.
b	Coke Oven Gas shall be desulfurized.	Coke oven gas desulfurization plant already installed at our Recovery Type Coke Oven.
c	Tar sludge shall be mixed with coal and reused.	The practice is already in place. The entire tar sludge is reused along with coal.
xv	BF shall be equipped with Top Recovery Turbine, dry gas cleaning plant, stove waste heat recovery, cast house and stock house ventilation system and slag granulation facility.	Presently we are operating 02 nos. of Blast Furnaces at our plant. BF 1 of capacity 1008 m3 has already equipped with Dry GCP. BF 2 of capacity 2015 m3 is already equipped with Wet GCP. Adequate ventilation system as per standards is provided at Cast house and stock house of both the Blast Furnaces. Slag granulation plant is installed in both the Blast Furnaces. The installation and commissioning of TRT has been completed in BF 2.
xvi	Secondary fume extraction system shall be installed on converters of Steel Melting Shop.	Converters are not envisaged in the proposed project. The Existing SMS consists of EAF. Primary and secondary fume extraction system is already in place at SMS.
xvii	Basic Oxygen Furnace (BOF) gas shall be cleaned dry.	BOF is not envisaged in the proposed project
xviii	Waste Heat Recovery system for charge preheating shall be included for 75 T Electric Arc Furnace.	Feasibility of the proposed system is under discussion
xix	Submerged Arc Furnace and Electric Arc Furnace shall be closed type with 4th hole extraction system.	The existing EAF installed at our plant are closed type and 4th hole extraction system..
xx	85-90 % of billets/slabs shall be rolled directly in hot stage. Only 10-15 % rolling shall be done through RHF using only Light Diesel Oil or Mixed BF/CO gas.	100% of slab is rolled directly in hot stage and 100% of billet is rolled through RHF by using Mixed gas(BF & CO) gas.
xxi	Cold Rolling Mill (CRM), color coating and galvanizing plants shall have CETP to treat and recycle the treated water from CRM complex. Sludge generated at CRM ETP shall be sent to TSDF.	Dedicated CETP of capacity 1200 KLD has been constructed for treatment of effluent generating from CRM complex. The treated water of ETP is completely reused at Iron Ore Beneficiation Plant and RO plant feed. The sludge of CETP is sent to TSDF setup by M/s. Re sustainability Limited (A unit of Ramky Enviro Engineers Limited)
xxii	Acid recovery plant shall be included	Already we have installed 04Nos. of ARP for recovery

	to recover acid from pickling lines.	of acid from pickling lines. A new updated ARP has been under construction .
xxiii	Dust emission from Steel Plant stacks shall not exceed 30 mg/Nm3 .	All new air pollution control equipment's proposed in the project are designed for emission below 10 mg/Nm3.Study by 3rd party has initiated (M/S Mecon Ltd) for the total air pollution control facility. Recommendation of the expert will be implemented stage wise.
xxiv	Water requirement for the plant shall be met from Back Water Reservoir of Hirakud Dam. Ground water abstraction is not permitted.	Presently 2713 M3/hr of water drawing from Hirakud Reservoir for our existing operating facilities. We are not abstracting any ground water.
xxv	Three tier Green Belt shall be developed covering at least 33% of the total project area by September, 2024 with native species all along the periphery of the project site of adequate width and tree density shall not be less than 2500 per ha. Survival rate of green belt developed shall be monitored on periodic basis to ensure that damaged plants are replaced with new plants in the subsequent years. Compliance status in this regard, shall be submitted to concerned Regional Office of the MoEF&CC.	We have earmarked 643.6 Acres of land out of our total 1950.25 Acres of plant area for development of three tire greenbelt. Already we have completed greenbelt development over 340 Acres. The greenbelt development work is in progress. As committed, we shall complete green belt development work over 33% of plant area as per the plan.
xxvi	Greening and Paving shall be implemented in the plant area to arrest soil erosion and dust pollution from exposed soil surface.	All the vacant areas within the plant are covered with greenery. The internal roads are made of concrete.
xxvii	Specific water consumption in the steel plant shall be less than 6.0 m3/t of finished product.	The specific water consumption of our plant is less than the target provided.
xxviii	Performance test shall be conducted on all pollution control systems every year and report shall be submitted to Regional Office of the MoEF&CC.	Performance evaluation tests of all pollution control equipment are being done every year. During the FY 2022-23 the performance evaluation of all pollution control equipment installed at our integrated steel plant was done by experts of NIT, Raurkela.
xxix	Dedicated railway siding within the steel plant complex shall be established by the proponent by	Railway siding has already been established within our integrated steel plant complex.

	December,2023 for the transportation of materials as committed.	
xxx	As committed by the PP, they shall prepare and submit the plan to conserve the nearby lakes and shall develop Lake Fronts for two number of lakes nearby.	Every year we renovate the existing lakes of 8 to 10 peripheral villages. Last year we have renovate the ponds. The details attached for your kind reference in the annexure.
xxxi	Parking area for trucks/dumpers shall be provided within the steel plant. No truck/dumper shall be parked outside the steel plant premises.	Dedicated truck parking area has been developed over 15 Acres within our plant premises. We do not allow any truck or dumper for parking outside our plant
xxxii	A proper action plan must be implemented to dispose of the electronic waste generated in the industry.	The entire electronic waste generating in the plant is being disposed off through vendors authorized by OSPCB/CPCB

B. GENERAL CONDITIONS:

I. Statutory compliance

Sl. No.	Conditions of EC	Compliance Status
i	The Environment Clearance (EC) granted to the project/ activity is strictly under the provisions of the EIA Notification, 2006 and its amendments issued from time to time. It does not tantamount/ construe to approvals/ consent/ permissions etc., required to be obtained or standards/conditions to be followed under any other Acts/Rules/Subordinate legislations, etc., as may be applicable to the project.	Noted. We shall obtain all the statutory approvals/consent/permission required for setting up and operation of the plant.

II. Air quality monitoring and preservation:

Sl. No.	Conditions of EC	Compliance Status

i	The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission as well as 06 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.	We have already installed 04 Nos. of Continuous Ambient Air Quality Station (CAAQS). For installation of additional 02 nos. of CAAQMS we have received the instrument at site . We shall complete the installation by June 2024. 46 nos. of continuous emission monitoring system (CEMS) have been installed at all the process stacks to monitor stack emission continuously. All the installed 04 nos. of CAAQMS, 46 nos. of CEMS and 05 nos. of CEQMS are connected to the server of CPCB & OSPCB. Regular calibration of all analyzers are done by approved NABL accredited laboratories. The monitoring result of Ambient Air, Stack emission analysis result for the period Oct'23 to Mar'24 is enclosed as **Annexure-III & IV**
ii	The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through laboratories recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.	For Fugitive emission monitoring at various locations throughout the plant presently is being done on monthly basis by in house laboratory. Stack emission, waste treated water, ambient air quality monitoring is being done through NABL accredited 3rd party laboratory. For fugitive emission we will follow the condition stipulated The fugitive Emission Monitoring result is enclosed as **Annexure-V**
iii	Sampling facility at process stacks and at quenching towers shall be provided as per CPCB guidelines for manual monitoring of emissions.	Sampling facilities such as port holes and platform have been provided at all the process stacks and quenching towers for manual monitoring of emission as per guidelines.
iv	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.	Study has been initiated to find out the requirement of the pending dust extraction and suppression system with detailed calculation of the ventilation volume, layout of the system and feasibility etc. The work is under progress by M/S Mecon for the entire plant. Based upon the recommendation & severity level, the proposed additional system will be installed.
v	The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.	Leakage detection systems have been installed in all the bag filters of the plant. Mechanized bag cleaning is also done for better

		maintenance of bags.
vi	Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads, shop floors, roofs, regularly.	08 nos. of road swiping machines have been procured for regular cleaning of internal concrete roads. Reputed vendors have been engaged for mechanized maintaining housekeeping with sufficient nos. of mobile equipment and vacuum cleaners for shop floors and cleaning of roofs.
vii	Recycle and reuse iron ore fines, coal and coke fines, lime fines and such other fines collected in the pollution control devices and vacuum cleaning devices in the process after briquetting/agglomeration.	The ore, coal, coke, and lime fines collected in APC devices and vacuum cleaners are processed and recycled through Sinter plant.
viii	The project proponent use leak proof trucks/dumpers carrying coal and other raw materials and cover them with tarpaulin.	Maximum raw material required for the plant is transported through rail. The remaining raw material which are transported through road are carried by good condition trucks & dumpers and are properly covered by tarpaulin.
ix	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).	Chain conveyor is already installed at our recovery type coke oven. Procurement of Mechanized vacuum cleaner is under process.
x	Land-based APC system shall be installed to control coke pushing emissions.	Adequate APC system has been installed at coke oven to control pushing emission.
xi	Monitor CO, HC and O2 in flue gases of the coke oven battery to detect combustion efficiency and cross leakages in the combustion chamber.	Online CO, HC and O2 monitors have been installed at coke oven-2 battery for detection of combustion efficiency and cross leakages in the combustion chamber.
xii	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.	The recovery type coke oven installed at our plant is equipped with vapor absorption system.
xiii	Wind shelter fence and chemical spraying shall be provided on the raw material stockpiles.	Mist cannons are provided in raw material stock piles. We have Installed 04 nos. of dry fog system at all 4 nos. of wagon tippler of RMHS. Dust suppression system of 12 truck tippler have commissioned. 350 nos. of additional water sprinkler installed to reduce

		dust from the stock piles, internal roads.
xiv	Design the ventilation system for adequate air changes as per prevailing norms for all tunnels, motor houses, Oil Cellars.	All the oil cellars are provided with sufficient ventilation system.

III. Water quality monitoring and preservation:

Sl. No.	Conditions of EC	Compliance Status
i	The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R 277 (E) dated 31st March 2012 (Integrated iron & Steel); G.S.R 414 (E) dated 30th May 2008 (Sponge Iron) 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.	CEQMS as per standard of CPCB is provided at outlet of BETP of coke oven, outlet of CRM ETP, and out lets of all 03 Nos. of wastewater treatment plants. All the installed CEQMS are connected to the server of CPCB and OSPCB for real time data transmission. Also, we have engaged NABL accredited laboratory for manual collection and analysis of treated water quality on monthly basis. The effluent quality analysis result is enclosed as **Annexure-VI**
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.	Pre and post monsoon monitoring of ground is being done on half yearly basis within the plant area and in the peripheral village areas through vendor recognized under Environment (Protection) Act, 1986 and having NABL accredited laboratories. The Ground Water analysis result is enclosed as **Annexure-VII**
iii	The project proponent shall provide the ETP for coke oven and by-product to meet the standards prescribed in G.S.R 277 (E) dated 31st March 2012 (Integrated iron & Steel); G.S.R 414 (E) dated 30th May 2008 (Sponge Iron) as amended from time to time; S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time as	BETP of capacity 1800 KLD have been installed at Coke Oven and By-Product Plant. It is designed to meet the standard prescribed in G.S.R 277 (E) dated 31st March 2012 (Integrated iron & Steel); G.S.R 414 (E) dated 30th May 2008 (Sponge Iron) as amended from time to time; S.O. 3305 (E) dated 7th December 2015 (Thermal Power

	amended from time to time;	Plants) as amended from time to time as amended from time to time;
iv	Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.	03 Nos. of STP of capacity 700, 900 & 900 KLD as per prescribed standard has been installed for treatment of domestic waste water generating from guest house, canteens, and quarters. Individual septic tank with soak pits have been provided in offices and workshops within the plant.
v	Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off.	Garland drains with settling tank has been provided at stock yards for arresting runoff during rainy days and water pollution.
vi	Tyre washing facilities shall be provided at the entrance of the plant gates.	05 Nos. of Tyre washing facility has been installed at material inward and outward gates. One more facilities installation is under progress.
vii	Treated water from ETP of COBP shall not be used for coke quenching.	COBP treated water will be further treated in MBR- High pH RO and followed by Mechanical vapour Re compressor Technology. The PO has already released to the vendor. The plant is under erection phase. The plant capacity is 100 m3/hr. The treated water will be used as makeup water of cooling towers..
viii	Water meters shall be provided at the inlet to all unit processes in the steel plants.	Water meters have been provided at the inlet of all the process units of the plant for regular monitoring of water consumption by individual units.

IV. Noise monitoring and prevention:

Sl. No.	Conditions of EC	Compliance Status
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.	Adequate noise control devices have been installed at noise generating units such as compressor, blower and turbine houses to meet the prescribed noise level. A third-party noise study has been done by M/s BS Envi tech and final report submitted. As per the recommendation we will implement the engineering solution to reduce noise level in

		shop floors. Regular monitoring is being done and the reports are submitted to the Regional Office of MoEF & CC, Bhubaneswar along with Six-monthly compliance report.

V. Energy Conservation measures

Sl. No.	Conditions of EC	Compliance Status
i	Use torpedo ladle for hot metal transfer as far as possible. If ladles not used, provide covers for open top ladles.	Only torpedo ladles are used hot metal transfer from Blast Furnace to SMS.
ii	Restrict Gas flaring to < 1%.	Noted, The entire CO and BF gas generating in the plant is being consumed in various reheating furnaces of the mills, pellet plant. SMS, LCP. Gas flaring is restricted during normal operation. Surplus BFG being consumed in newly commissioned 250 TPH dual fired boiler.
iii	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;	The feasibility study has conducted by JSW Energy team to install the solar panel. Planned to procure green certificate to comply RPO.
iv	Provide LED lights in their offices and residential areas.	LED Lights have been provided in all the offices, plant shops and residential areas.
v	Ensure installation of regenerative type burners on all reheating furnaces.	As directed, we shall gradually replace the burners of all reheating furnaces with regenerative type burners.

VI- Waste Management

Sl. No.	Conditions of EC	Compliance Status
i	Oil Collection pits shall be provided in oil cellars to collect and reuse/recycle spilled oil. Oil collection trays shall be provided under coils on saddles in cold rolled coil storage area.	Oil collection pits are provided at all the cellars. Collection tray under coil at coil storage area is provided. Oiling of cold rolled coils is done through Electrostatic sprayers to avoid spillage.

ii	Kitchen waste shall be composted or converted to biogas for further use.	Composting Machine of capacity 500 Kg/Day has been installed for converting kitchen waste generating from all canteens, guest houses and staff quarters. The compost generated is being utilized for horticulture development.

VII. Greenbelt

Sl. No.	Conditions of EC	Compliance Status
i	The project proponent shall prepare GHG emissions inventory for the plant and shall submit the programme for reduction of the same including carbon sequestration by trees.	GHG emission are being calculated on a daily basis as per WSA guidelines. Same also is being calculated shop wise on a monthly basis as per CBAM guidelines. The details decabonization road map prepared upto FY2030 includes carbon sequestration by trees.
ii	Project proponent shall submit a study report on Decarbonization program, which would essentially consist of company's carbon emissions, carbon budgeting/ balancing, carbon sequestration activities and carbon 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 monitorable with defined time frames", when PP comes for EC proposal. This study shall be formulated keeping in view of India's Net-zero commitment at the COP-26 Climate Summit.	Life cycle assessment study of the products initiated. Work order released to M/S Sphera to do the study. Data for the study submitted to the vendor. We are working on very aggressive way to meet the group level target of the decarbonization. We have prepared decarbonization road map and working on the implementation of the projects to reduce CO2 emission. Some projects list are given below. 1. Dual fired (Gas, Coal) 250 TPH Boiler for utilization of BF & CO gas. 2. Coal dryer in DRI to reduce moisture content of coal. 3. Commissioning of Zero Power furnace. 4. VFD installation in WHRB ID fans (6 nos: DRI 1to 6) of DRI. 5. Increase of PCI rate in BF-1 &2(205 kg/thm) 6. Steam trap replacement, repairing and install new one (total 200 nos).

VIII. Public hearing and Human health issues

Sl. No.	Conditions of EC	Compliance Status

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 10 villages, namely Thelkoli, Dhubenchapal (Gontiapada), Banjiberna, Siripura, Kheruwal, Sradhapali, Maliatika, Khadiapali, Sunamal, Derba villages based on the socio-economic survey and undertake community developmental activities in consultation with the village Panchayat and the District Administration as committed by the PP.	As per the provisions of Ministry's OM vide F.No. 22-65/2017-IA.III dated 30/09/2020 and commitment made by us we have already started undertaking community development activities in the 10 villages namely Thelkoli, Dhubenchapal (Gontiapada), Banjiberna, Siripura, Kheruwal, Sradhapali, Maliatika, Khadiapali, Sunamal and Derba..
ii	Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.	Emergency preparedness plan and Disaster management plan has been prepared and the same is being implemented. Mock drill are being conducted as per decided frequency.
iii	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.	We have already provided the necessary PPE as per norms to all workers according to their work function. Jeans jacket is mandatory on the shop where heat hazard is there. On the furnace are aluminum jacket is being provided during lancing and sampling etc. Heat shield is installed on the furnace area to protect against radiation hazard. Heat stress analysis for workers working in high temperature has been completed.
iv	Occupational health surveillance of the workers shall be done on a regular basis and records maintained.	Occupational health checkup of all workers are done as per norms on yearly basis and records are maintained

IX. Environment Management

Sl. No.	Conditions of EC	Compliance Status

i	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 / conditions. The company shall have defined system of reporting infringements / deviation EC Identification No. - EC23A008OR181742 File No. - IA-J-11011/40/2009-IA-II(I) Date of Issue EC - 13/01/2023 Page 11 of 16 / 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.	Company Environment Policy approved by the Board of Directors is already in place. The environment policy has been prepared to have proper checks and balances focusing any infringements/deviation/violation of the environmental / forest / wildlife norms.
ii	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.	Separate Environmental Cell have been established having qualified persons headed by Senior Executive reporting directly to the head of the organization.

X. Miscellaneous

Sl. No.	Conditions of EC	Compliance Status
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.	Noted, We have intimate the public about the grant of EC through publication in various District and State level newspapers in vernacular language within the stipulated time. We shall also upload the EC in our company website after receipt of the same. Attached scanned copy.
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.	The copy of EC have been submitted to all Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government for display within the stipulated time.

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.	We are regularly uploading the half-yearly compliance status of EC condition in our company website.
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.	The monitoring results of pollutants namely PM10, SO2, NOx in ambient air as and stack emissions is displayed to public through digital display board installed at the main gate. The monitoring data is also uploaded on our website on half-yearly basis.
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.	We are regularly submitting the soft copy of six-monthly compliance status of EC conditions at the Regional Office of MoEF&CC..
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.	We are regularly submitting Environmental statement in Form-V as per the guidelines to Odisha State Pollution Control Board. The last environmental statement submitted at OSPCB bearing letter no-JSWBPSL/ENV/23-24/040 dated-19/09/2023.
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.	Noted, we shall inform the Regional Office as well as the Ministry. CTE granted by the OSPCB bearing letter no-15404/IND-II-CTE-6021, Date-04.10.2023.
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.	We are committed to abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and that during their presentation to the Expert Appraisal Committee.
ix	The PP shall put all the environment related expenditure, expenditure related to Action Plan on the PH issues, and other commitments made in the EIA/EMP Report etc. in the company web site for the	Noted, as directed we will put all the environment related expenditure, expenditure related to Action Plan on the PH issues, and other commitments made in the EIA/EMP Report etc. in the company web site for the

	information to public/public domain. The PP shall also put the information on the left over funds allocated to EMP and PH as committed in the earlier ECs and shall be carried out and spent in next three years, in the company web site for the information to public/public domain.	information to public/public domain. We will also put the information on the left-over funds allocated to EMP and PH as committed in the earlier ECs and shall be carried out and spent in next three years, in the company web site for the information to public/public domain.
x	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, we will not go for any expansion or modification without prior approval from the Ministry of Environment, Forests and Climate Change (MoEF &CC).
xi	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.	We will extend full cooperation to the officers of Regional Office MoEF&CC during inspection and monitoring.

8	The Ministry reserves the right to stipulate additional conditions, if found necessary at subsequent stages and the project proponent shall implement all the said conditions in a time bound manner. The Ministry may revoke or suspend the environmental clearance, if implementation of any of the above conditions is not found satisfactory.	Noted
9	Concealing factual data or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of the Environment (Protection) Act, 1986.	Noted

10	Any appeal against this environmental clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.	Noted
11	The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules 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 matter.	Noted
12	This issues with approval of the competent authority.	

ANNEXURE – 1

STATUS OF ACTION PLAN AS PER MoEF&CC, O.M. DATED 30/09/2020.

Sl. No.	Area	Year 2022	Year 2023	Year 2024	Total Budget In Crores	Status of Implementation as on 30.09.2023
1	Road Infrastructure	Construction of road in Derba (Repairing 3 km) and Thelkoloi service road (1km)	Construction of road in Sripura (2 km) and Khadiapalli (1km)	Construction of road in Dubhenchaper (3 km) and Lapanga (1km)	7.0	Thelkoloi Service Road Repairing has been Completed Repairing of Road at Derba is under construction Construction of Road at Lapanga is under construction Roads at Sripura, Khariapali & Dubhenchaper has been completed
2	Rainwater harvesting	Construction of village pond at Lapanga	Construction of village pond at Dhubenchapper	Construction of village pond at Khariapalli	1.5	Construction/Renovation of village pond at Lapanga has been completed. Construction/Renovation of village pond at Dhubenchapper is Complete. Construction/Renovation of village pond at Khadiapali is Complete. In addition, waterbody development was conducted at following ponds as well: a. Brahmanpada Pond, Thelkoloi b. Chuhuri Pond, Dhubenchhapal c. Bansimal Pond, Bansimal

						d. Binova Nagar Pond, Lapanga e. Rohidaspada Pond, Lapanga f. Saharapada Pond g. Khadiapali Pond, Khadiapali h. Neru Pond, Banjberna i. Banjiberna Pond, Banjiberna j. Dantamura Pond k. Landupali Pond l. Old Khinda Pond m. Das Pond, Lapanga n. Jugipali Pond, Salad o. Barikpali Pond, Salad p. Ghuhuri Kata Pond, Sripura q.Talipada Pond, Derba r. Kumdapada Pond, Derba s. Gountiyapada Pond, Dhubenchhapal t. Ramchandrapur Pond, Sripura u. Gariakata Pond, Sripura v. Nagamata Pond Thelkoloi x. Kinaloi Pond y. Tabdabahal Pond
3	Healthcare facilities	Healthcare facility for local people in vicinity of the plant to address respiratory, skin, ENT issues etc. related to environmental pollution – Commencement of construction	Completion of construction	Procurement of equipment and engagement of medical staff (operational expenditure like staff salary and consumables to be borne by BPSL)	30.0	Mobile medical unit is operational in the peripheral villages. Company has setup a dispensary at Thelkoloi Village for community. The dispensary is operational. In addition, the company has established 1st Trauma Care Center of Western Odisha at

		of building				District Headquarter Hospital, Jharsuguda in partnership with District Administration for the benefit of critical cases.
4	Drinking water & sanitation	Allocation of funds towards government drinking water mission and Sanitation in the close vicinity. The approved programmed would be communicated to MoEFCC through 6 monthly compliance report	-	-	5.0	We are providing drinking water through tankers to 10 nos. of peripheral villages and will continue to provide the same till Har Ghar Jal Yojana is implemented by Govt under "Har Ghar Jal Yojna", schedule to be done end 2024. Water Sanitation & Hygiene (WaSH) Programme in convergence with Dist. Govt. is operational focusing on following aspects, 1. Establishment of Piped Drinking Water Facilities in Village 2. Ensuring ODF+ Villages 3. Solid Waste Management

5	Vocational training arrangements for women and youth	Vocational training courses arrangements for women through various Govt departments/ NGOsTailoring, beautician and mushroom cultivation etc. - 200 women Vocational Training courses for local youth through local ITIs for following trade Electrician, Welder Fitter Electrician Mason Moto winding Machining etc for about 100 local youth	Tailoring, beautician and mushroom cultivation course - additional 200 women Electrician, welding, fitting and machining course for additional 100 local youth	Tailoring, beautician and mushroom cultivation course - additional 200 women Electrician, welding, fitting and machining course for additional 100 local youth.	1.7	Skill training center on Tailoring has been established at Thelkoloi Village for the women of peripheral villages. Women trained will be attached to the upcoming sewing production unit. Skill training on other livelihood program (Mushroom, Poultry, Floriculture, Fishery etc.) is under progress under Holistic Livelihood program.

6	Education	Strengthening of village school library – 4 Nos. of PCs and 500 books with bookshelves to Thekoloi Hugh School and Dhubenchapper upper Primary school, Sripura High School & Bir Surendra Sai High School	Strengthening of village school library – 4 Nos. of PCs and 500 books with bookshelves to Strengthening of village school library – 4 Nos. of PCs and 500 books with bookshelves to Bisadhi Upper Thekoloi Upper Primary School, Lapanga High School, Saraswati Sishu Vidya Mandir & Sripura Upper Primary School	Strengthening of village school library – 4 Nos. of PCs and 500 books with bookshelves to Bisadhi Upper Primary School, Bir Surendra Sai Upper Primary School, Lapanga Upper Primary School & Sripura Upper Primary School	3.0	Renovation of following schools are complete: Thelkoloi High School is complete. Construction is under progress for additional section. Dhubenchapper Primary School. Sripura Primary & Middle School Bisadihi Primary School Thelkoloi Upper Primary School Lapanga High School Lapanga Primary & Upper Primary School Saraswati Sishu Vidya Mandir School In addition, renovation of other peripheral schools done at Lapanga & Gihcamura panchayat. Library setup in 12 schools has been done. Partnership with GoO for MO school civil/ Infrastructural development for 60 schools of Sambalpur.
7	Electrification/ Solar Street Lighting	Solar LED lights at Lapanga, Thelkoloi - 50 each village	Solar LED lights at Dhubenchapper, Derba - 50 each village	Solar LED lights at Khariapalli, Khinda - 50 each village	1.8	Installation of Solar LED lights under progress. Installation Status till Mar'24: Lapanga GP – 33 Nos. Thelkoloi GP – 37 Nos. Ghichamura GP – 14

						Nos. Khinda GP– 4 Nos. Installation in other areas: Bomaloi GP – 4 Nos. Hirma GP – 4 Nos.
					TOTAL	**50.0**	

COMPLIANCE TO CONDITION LETTER
No.J-11011/40/2009-IA II(I) Dated 17.10.2012 for 3.0 MTPA

A. Specific Conditions:

No	Env. Parameter	Condition Description	Compliance Status
i	Statutory compliance	Compliance to all the specific and general conditions stipulated for the existing plant by the Central/State Govt. shall be ensured and regular reports submitted to the Ministry and its Regional Office at Bhubaneswar.	All the conditions stipulated by Central & State Government Authorities are being complied. Half yearly compliance reports along with monitoring data are being submitted at OSPCB / CPCB & MoEF&CC regularly. Last Six-monthly compliance report was submitted vide letter no-JSWBPSL/ENV/23-24/052 on dated 30.11.2023
ii	Air Quality Monitoring and Preservation	Efforts shall be made to reduce RSPM levels in the ambient air and a time bound action plan shall be submitted. On-line ambient air quality monitoring and continuous stack monitoring facilities for all the stacks shall be provided along with the sufficient air pollution control devices viz. Electrostatic precipitator (ESP),gas cleaning plant cyclone, multi-cyclone, wet scrubber, bag house, bag filters etc. shall be provide to keep the emission levels below 50 mg/Nm^3 by installing energy efficient technology. At no time the emission level shall go beyond the prescribed standards. Interlocking facilities shall be provided so that process can be automatically stopped in case emission level exceeds the limit.	Adequate control measures have been adopted to control RSPM. • Five numbers of high pressure mist beam has been installed in Raw material handling stock yard area. • 06 numbers of Mobile water sprinkling tankers are being engaged for regular water sprinkling on haul roads and in construction areas for control of fugitive dust emissions. • 08 nos. of Mechanized Road sweepers have been engaged for continuous cleaning of concrete roads inside the plant premises to control fugitive dust. • 350 nos. of fixed water sprinkling have been installed in stock yards, raw material handling areas and internal concrete roads for dust suppression. • 04 nos. dedicated dry fog system has been installed in all 04 nos. of wagon tippler. • 04 Numbers of Continuous Ambient Air Quality Monitoring System have been installed within plant in consultation with OSPCB to monitor the Ambient Air Quality. • 46 numbers of Continuous Emission Monitoring systems have been installed in all stacks of DRI, CPP, Iron & Steel making process Units. • Bag Filters and Dry Fog systems are installed in Iron ore crushing and screening areas. • Dry BF Gas Cleaning system and bag filters are provided in Blast furnace-1. ESP is provided for in plant de dusting of various units including DRI and Sinter plant. • ESP's are provided in DRI-WHRB, AFBC & CFBC Boilers of CPP and Sinter Plant. • Fumes treatment plant installed at SMS-1 and

			SMS-2. • Stack emission monitoring data for the period Oct'23 to Mar'24 is enclosed as **Annexure-IV** • A list of Air Pollution Control Devices installed is enclosed as **Annexure–II** • In the event of failure of any pollution control system, automatic interlocking facility has been provided with all units to hold the process and minimize the emission. • In the event of power failure in DRI automatically the DG starts and supply power to auxiliaries, hold the Process and minimize the Emission. • Six monthly monitoring reports are being submitted to MoEFCC, CPCB and SPCB regularly. • High pressure water spray system installed in all truck tipplers to reduce fugitive dust. • 02 nos of additional CAAQMS procured. These are under installation and commissioning.
iii	Air Quality Monitoring and Preservation	As proposed, electrostatic precipitator (ESP) shall be provided to Sinter Plant, WHRB, CFBC, DRI and Slag Cement Plants; bag house to Blast Furnace and ESP & bag filters to by-product recovery type of coke oven to control SPM levels within 50 mg/Nm^3. Fume extraction system with bag filters shall be provided to electric arc furnace and ladle furnace.	As mentioned in our Environment Management Plan ESPs and other Pollution Control systems have been installed to control dust emission in different units. The details are as follows. **DRI/WHRB** There are 12 numbers of ESP installed at the Hot end of the DRI Kiln, 3 numbers ESP and 3 numbers of Bag filter for dedusting system at cold end of the DRI kiln. **Captive Power Plant**: Two numbers of ESP installed at CPP 40 MW and 60MW AFBC Boilers, and 06 nos. of ESP installed in CFBC boilers of 3x130 MW CPP to keep the emission well within the limit **Blast Furnace** One de dusting system have been installed in cast house of Blast furnace -1 followed by Dry Gas cleaning plant. In BF-2 two nos. of dedusting systems have been installed in Cast house and stock house to keep the emission level within the norms. **Coke Oven** One dedusting system installed in Coke oven -2 for control of emission. SOPERCO technology is available in Coke Oven-2 to control charging emission. **Steel Melting Shop** Four nos. of fumes extraction and treatment plant along with bag filters have been installed to control the

			fugitive & process dust emission in the EAF and LF of SMS-I, Similarly in SMS-II one FTP have been installed . In the proposed cement plant adequate pollution control system :Bag filter will be installed.
iv	Air Quality Monitoring and Preservation	Hot gases from DRI kiln shall be passed through Dust Setting Chamber (DCS) to remove coarse solids and after Burning Chambers (ABC) to burn CO completely and used in waste heat recovery boiler (WHRB).The gas then shall be cleaned in ESP before leaving out into the atmosphere through ID fan and stack.	All the DRI Units have been equipped with DCS, ABC followed by independent waste heat recovery boilers (WHRB) for power generation. Independent ESP's have been installed for all the DRI kilns. There are 12 numbers .of ESPs have been installed in the DRI complex.
v	Statutory compliance	All the standards prescribed for the coke oven plants shall be followed as per the latest guidelines, Naphthalene scrubbing unit shall be provided to remove residual naphthalene from coke oven gas. Ammonia released in de-sulphuriziton section of coke oven plant shall be catalytically cracked to Nitrogen and Hydrogen. BF top gas shall be cleaned in dust catcher and gas cleaning plant (GCP) comprising of bag filters and used in furnace of CSP, BF, EAF, sinter plant, lime & dolo plant. Bag filters with adequate stack height shall be provided to lime and dolo plant. Proper and full utilization of coke oven gases in power plant using heat recovery steam generators shall be ensured and no flue gases shall be discharged into the air.	All efforts are being taken to comply with the prescribed standards and guidelines for the coke oven facilities. • The Coke oven-1 is of Non Recovery type. The hot gas of coke oven is being utilized in the power generation passing through waste heat recovery boilers (WHRB) feeding to two numbers of turbo generators which generates 16 MW power. • The Coke Oven Plant -2 (Recovery type) has been installed with adequate pollution control equipment like Pushing & Charging Emission Control system and Bag filter. Stack height has been designed for better dispersion of pollutants. • The byproduct plant is equipped with naphthalene scrubbing unit and Desulphurization unit to remove residual naphthalene from coke oven gas. • The Coke oven gas is being utilized systematically and no flue gas discharged into atmosphere. • BF top Gas is cleaned in dust catcher and Gas cleaning plant and is being used in Tunnel Furnace of CSP, Sinter Plant, Lime/Dolo Plant, SMS, Wire and Rod Mill and Pellet plant.
vi	Statutory compliance	The National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R No. 826(E) dated 16th November 2009 shall be followed.	• The National Ambient Air quality Emission standards issued by the Ministry vide G.S.R No. 826(E) dated 16th November 2009 are being followed. • Monitoring reports for the period Oct'23 to Mar'24 is enclosed as **Annexure-III**
vii	Statutory compliance	All the standards prescribed for the coke oven plants shall be followed as per the latest guidelines. Proper and full utilization	All the standards prescribed for the coke oven plants are being followed. • In coke oven -1 hot gas is being completely

		of coke oven gases in power plant using heat recovery steam generators shall be ensured and no flue gases shall be discharged into the air.	utilized in Waste Heat Recovery Boilers to generate power in 2x8 MW power plant. • In Coke Oven-2 De dusting and Pushing and Charging emission control system have been installed. • SOPERCO technology is available in Coke Oven-2 to control Charging emission. • Biological effluent treatment plant (BETP) have been installed for treatment of effluent generate from byproduct plant. • The clean coke oven gas is being utilized in coke oven battery heating, Tunnel furnace of CSP, Lime/Dolo plant and pellet plant,planned to utilize in CRM . • 100 m3/hr MBR-RO-ZLD project of Coke Oven-2 is under erection phase .
viii	Air Quality Monitoring and Preservation	In-plant control measures for checking fugitive emissions from all the vulnerable sources shall be provided. Bag filters shall be provided at coal mill, intermediate bin/separation building, product storage silo, day bin, iron ore circuit, load out, cooler discharge to control fugitive dust emission. Dust suppression system with water sprinklers shall be provided at raw material stock piles and loading/unloading point. Dust extraction system with bag filters shall be provided at all raw material transfer points, crusher house, junction towers and feed points. All conveyors shall be completely covered by GI sheets. All the roads shall be asphalted to control dust emissions.	Adequate control measures have been adopted to control fugitive dust generation • ESP's are provided in DRI-WHRB (12 nos.), AFBC. (02nos.) & CFBC(06 nos.) Boilers of CPP, Sinter Plant and pellet plant. • 04 no Dry Fog systems installed wagon tippler of RMHS • Fumes treatment plant has been installed at SMS-1(4 nos.) and SMS-2(01 no). • Dry BF Gas Cleaning system and bag filters are provided in Blast furnace-1. ESP is provided for in plant de dusting of various units including DRI and Sinter plant. • Fixed water sprinkler have been installed in stock yards, raw material handling areas and internal Concrete roads for dust suppression. • 05 numbers of high pressure mist beam has been installed in Raw material handling stockyard area. • 06 numbers of Mobile water sprinkling tankers are being engaged for periodical water sprinkling on all the internal roads within the plant premises. • 08 nos. of Mechanized road sweepers have been engaged for continuous cleaning of concrete road inside the plant premises to control fugitive dust. • 07 nos of additional dedusting system have commissioned in Coke Oven-2 . • High pressure water spray system commissioned in all truck tippler. • 156 new rubbish chute has installed to handle spillage and dust.

<table>
<tr><td></td><td></td><td></td><td>• In the following units Fugitive emission is being monitored and report for the period Oct'23 to Mar'24 is enclosed as Annexure-V
<table>
<tr><th>No</th><th>Name of the units</th><th>Frequency</th></tr>
<tr><td>1</td><td>RMHS</td><td rowspan="9">Once in a month</td></tr>
<tr><td>2</td><td>DRI</td></tr>
<tr><td>3</td><td>Coke Oven</td></tr>
<tr><td>4</td><td>Power Plant</td></tr>
<tr><td>5</td><td>Pellet plant</td></tr>
<tr><td>6</td><td>Sinter plant</td></tr>
<tr><td>7</td><td>Blast Furnace</td></tr>
<tr><td>8</td><td>Steel melting shop</td></tr>
<tr><td>9</td><td>Lime plant</td></tr>
<tr><td>10</td><td>CSP</td><td></td></tr>
<tr><td>11</td><td>CRM</td><td></td></tr>
<tr><td>12</td><td>WRM</td><td></td></tr>
<tr><td>13</td><td>Pipe & Tube plant</td><td></td></tr>
</table></td></tr>
<tr><td>ix</td><td>Air Quality Monitoring and Preservation</td><td>Gaseous emission levels including secondary fugitive emissions from all the sources shall be controlled within the latest permissible limits issued by the Ministry and regularly monitored. Guidelines/code of practice issued by it CPCB shall be followed. New standards for the sponge iron plant issued by the Ministry vide G.S.R 414(E) dated 30th May.2008 shall be followed.</td><td>In all the existing units adequate air pollution control devices have been installed to keep gaseous emission within limit. Monitoring Report is attached as Annexure-IV.</td></tr>
<tr><td>x</td><td>Air Quality Monitoring and Preservation</td><td>Vehicular pollution due to transportation of raw material and finished product shall be controlled. Proper arrangements shall also be made to control dust emissions during loading and unloading of the raw material and finished product.</td><td>• Vehicles carrying raw materials and finished products are being covered with tarpaulin.
• Water sprinkling arrangement has been made at raw material handling areas to control dust emission during loading and unloading raw materials.
• Mobile water sprinkling tankers have been engaged for regular water sprinkling on raw material transporting roads to control fugitive dust.
• Five numbers of Wheel washing system have already been installed to clean the vehicle wheel and control the fugitive dust on road.
• One more no of Wheel washing system is under installation.</td></tr>
</table>

xi	Water Quality Monitoring and Preservation	Total water requirement from Hirakud Dam shall not exceed 5,500 m^3/hr although 'Permission' for the drawl of 10,194 m^3/hr.water is accorded by the Water Resource Department. Govt. of Orissa vide letter dated 17th June, 2003. Efforts shall further be made to use maximum water from the rain water harvesting sources. As proposed, modified wet quenching system shall be provided to coke oven plant. Air cooled condensers and closed circuit cooling system shall be provided to reduce water consumption and water requirement shall be modified accordingly. All the effluent shall be treated and used for ash handing, dust suppression and green belt development. No effluent shall be discharged and 'Zero' discharge shall be adopted. Sanitary sewages shall be treated in septic tank followed by soak pit and used for green belt development.	• Presently 2713 M3/hr of water drawing from Hirakud Reservoir for our existing operating facilities. • Waste water is being treated in waste water treatment plants (WWTP-1,WWTP-2 and WWTP-3) and treated water reused within plant premises as RO plant feed, for developing green belt, fire fighting, process make up water for coal washery, iron ore beneficiation plant and pellet plant and ash conditioning at captive power plant. • The process effluent CRM is being treated in effluent treatment plant of capacity 1200KLD and effluent from coke oven treated in BETP of capacity 75 M3/hr and reused within plant • All office buildings and plant toilets are provided with individual septic tanks and soak pits. • Three numbers of Sewage treatment plant has been provided of capacity STP-1-700 KLD,STP -2-900 KLD and STP-3-900 KLD for treatment of sewage in township maintain zero discharge. • To achieve ZLD we have installed 510 M3/hr Reverse Osmosis plant for maximize the utilization of the fresh water.
xii	Water Quality Monitoring and Preservation	Effluent treatment plant (ETP) shall be provided for the treatment of Phenolic effluent from coke oven plant and the treated water shall be used for sprinkling at coal stockyard. Clarifier, sludge pond and filter press shall be provided in raw water treatment plant. DM plant water shall be neutralized in neutralization pit and the treated water shall be used for ash handling. Process wastewater shall be recycled /reused in the plant. Cooling tower blow down shall be in the plant for dust suppression and slag granulation, pig casting machine etc. Provision of separate drains for the process and storm water shall be kept.	• The phenolic effluent is being treated in BETP plant and treated effluent is being reused for quenching of hot coke in Coke oven 2. • Neutralization pits have been provided in DM Plant for neutralizing the effluent and treated water is used in ash silos for ash conditioning. • Process effluent/waste water generated from other processes such as Cold Rolling Mill Complex is being treated in Effluent Treatment Plant and treated wastewater is used for sprinkling on haul roads to control fugitive emissions. • Cooling tower blowdown water is being treated is WWTP-1,2 & 3 and utilized for the dust suppression, RO feed, fire fighting, quenching, ore benefication, horticulture use.
xiii	Water Quality Monitoring and Preservation	All the wastewater from the coke oven plant containing, cyanide, phenol and COD etc. Shall be properly treated in the BOD plant. Continuous monitoring of Total Organic compounds (TOC) including cyanide,	• The Coke Oven -1 is non-recovery type. Water is only used for quenching which is collected in settling tanks and reused in the process of quenching.

		phenol and COD etc. shall be done at the outlet of ETP (BOD plant) and recovery of products like tar, ammonia, naphthalene etc shall be ensured.	• The waste water containing cyanide, phenol and COD is being treated in BETP plant and treated effluent is being reused for quenching of hot coke in Coke oven-2. • Online monitoring system have been installed to monitor the treated water quality of the effluent generated from the BETP plant.
xiv	Water Quality Monitoring and Preservation	Efforts shall be made to make use of rain water harvested. If needed, capacity of the reservoir shall be enhanced to meet the maximum water requirement. Only balance water requirement shall be met from other sources.	BPSL has two water reservoirs having capacity 200000 M3 and 134000 M3 which help in rain water harvesting during monsoon. Rain water collecting in these reservoirs are being utilized as replacement of fresh make up water. We have 03 blow down water collection tanks . Rain water is being collected on the empty part of the tank and same is being treated and utilized for ore beneficiation, fire fighting, dust suppression, RO water plant feed water. We have also done feasibility study of rainwater harvesting by M/S KRG foundation. As per the recommendation we will implement the project.
xv	Statutory compliance	'Zero' effluent discharge shall be strictly followed and no wastewater shall be discharged outside the premises.	As a measure of water conservation and also to ensure Zero liquid discharge, For 100% reuse and utilization of treated waste water RO plant of capacity 510 m^3/hr has been installed & the same is in Operation. All the 03 Nos. of existing STP's have been upgraded to meet the prescribed standards. All the STP's are operating satisfactorily. All the effluent water and storm water drains have been segregated throughout the plant.
xvi	Statutory compliance	The water consumption shall not exceed 16 m^3/Ton of Steel as per prescribed standard.	Consumption of water in steel making areas is maintained below the prescribed standard. Specific fresh water consumption of the integrated Steel plant for the year 2023-24 is 2.71 M3/tcs.
xvii	Water Quality Monitoring and Preservation	Regular monitoring of influent and effluent surface, sub surface and ground water shall be ensured and treated wastewater shall meet the norms prescribed by the State Pollution control Board or described under the E (P) Act whichever are more stringent. Leachate study for the effluent generated and analysis shall also be regularly carried out and report submitted to the Ministry's Regional officer at Bhubaneswar, OPCB and CPCB	• Monitoring of treated effluent, treated waste water and ground water is being monitor regularly. • Analysis report of ground water quality in the surrounding villages is enclosed as **Annexure-VII**. • Treated effluent quality of ETP outlet , treated waste water quality WWTP-1, WWTP-2, WWTP-3 outlets and outlet of BETP for the period Oct'23 to Mar'24 is enclosed as **Annexure-VI.** • Six monthly compliance with Monitoring reports is being submitted at MoEF&CC, OSCPB and

<table>
<tr><td></td><td></td><td></td><td>CPCB.
• Last six monthly compliance status with monitoring report was submitted vide letter no-JSWBPSL/MOEF&CC/23-24/052 on dated 30/11/2023</td></tr>
<tr><td>xviii</td><td>Waste Management</td><td>Iron ore fines, process dust, and mill scales shall be recycled to sinter plant to produce sinter. Sludge and slag from electric arc furnace (EAF) shall also be recycled in the sinter plant. Scrap shall be reused in the steel melting shop (SMS).</td><td>• Iron ore fines, process flue dust, mill scales and EAF slag generating in the plant is being recycled through sinter plant & pellet plant.
• Iron ore fines are consumed for making pellets which is further used in DRI Kilns.
All the scraps are being recycled in the Steel melting shop.</td></tr>
<tr><td>xix</td><td>Waste Management</td><td>All the coal fines, char from DRI plant and washery rejects shall be utilized in AFBC boiler of power plant and no char shall be used for briquette making or disposed off anywhere else. AFBC boiler shall be installed simultaneously along with the DRI plant to ensure full utilization of char from the beginning. All the blast furnace (BF) slag shall be granulated and used in manufacturing. Portland slag cement (PSC) in the proposed cement plant. Scrap shall be used in steel melting shop (SMS) EAF & SMS slag kiln accretions shall be properly utilized. All the other solid waste including broken refractory mass kiln accretions shall be properly disposed off in environment friendly manner. Tar sludge from coke oven decanter, waste oil and oil sludge shall be properly disposed as per Hazardous waste (Management & Handling) Rules, 1989 as subsequently amended.</td><td>Details of wastes and utilization
<table>
<tr><th>No</th><th>Waste Description</th><th>Utilization /disposal</th></tr>
<tr><td>01</td><td>Coal fines</td><td>Reused in Captive power plant</td></tr>
<tr><td>02</td><td>DRI char</td><td>Reused in Captive power plant</td></tr>
<tr><td>03</td><td>DRI accretion materials and refractory mass</td><td>Utilized in internal road and low lying area filling</td></tr>
<tr><td>04</td><td>SMS Slag</td><td>Metallic part recovered and residue utilized in road making and land filling</td></tr>
<tr><td>05</td><td>Blast furnace slag</td><td>Entire quantity sold to the Cement plant</td></tr>
<tr><td>06</td><td>Mill scale and Scrap</td><td>Recycled in SMS</td></tr>
</table></td></tr>
<tr><td>xx</td><td>Waste Management</td><td>All the slag shall be used for land filling inside the plant or used as building material only after passing through Toxic chemical Leachability Potential (TCLP) test. Toxic slag shall be disposed in secured landfill as CPCB guidelines. Otherwise hazardous substances shall be recovered from the slag and output waste and be disposed in secured landfill as per CPCB guidelines.</td><td>Metallic part of the slag recovered reused in sinter plant and remaining slag is being used internal road making ,railway ballast etc.</td></tr>
<tr><td>xxi</td><td>Waste Management</td><td>Proper utilization of fly ash shall be ensured as per Fly ash Notification, 1999 and subsequent amendment in 2003 & 2010. All the fly ash and BF slag shall be fully utilized in manufacturing of Pozollona Portland</td><td>The ash generated from CPP is being utilized in different area like fly ash brick manufacturing, low lying area filling, embankment rising and quarry void filling. In the year 2023-24 we have utilized 100 % of fly ash generated in our plant.</td></tr>
</table>

		Cement (PPC) and Pozollona Slag Cement (PSC)	Fly ash is being supplied to 45 numbers of fly ash based brick manufacturing units in and around Jharsuguda, Sambalpur, Sundargarh and Deogarh District of Odisha free of cost with transportation subsidy @150/Ton for maximum utilization of ash. Started utilization of the fly ash in nearby Cement Plant
xxii	Waste Management	Proper handling, storage, utilization and disposal of all the solid waste shall be ensured and regular report regarding toxic, metal content in the waste material and the composition, end use of solid/hazardous waste shall be submitted to the Ministry's Regional Office at Bhubaneswar, OPCB and CPCB.	Proper handling, storage, utilization and disposal of all the solid waste ensured. TCLP study of all the waste done. Annual returns of hazardous waste are being regularly submitted to SPCB Odisha.
xxiii	Waste Management	A time bound action plan shall be submitted for solid waste, its proper utilization and disposal.	Solid waste is disposed as per the action plan specified in our EMP Plan. The solid waste generate from various plant units are being recycled within the plant. Necessary steps are being taken for maximum utilization of Solid waste.
xxiv	Risk Mitigation and Disaster Management	A Risk and Disaster Management Plan along with the mitigation measures shall be prepared and a copy submitted to the Ministry's Regional at Bhubaneswar OPCB and CPCB with in 3 months of issue of environment clearance letter.	Risk and Disaster Management Plan prepared from the very beginning of the plant operation and were submitted at your good office along with our Six monthly compliance reports from time to time with addition of some new units, new hazardous chemicals Revised and up dated risk & Disaster Management Plan along with mitigation measures and the same is followed as and when required. and their inventory changes in key personnel etc. To combat emergency in the plant a dedicated department with all sorts of facilities has been established.
xxv	Greenbelt	As proposed, green belt shall be developed in 430 acres (33%) out of total 1300 acres in and around the plant as per the CPCB guidelines in consultation with DFO.	We have constantly increased every year green coverage areas. We have planted 46173 nos. of saplings during the year 2023-24.
xxvi	Corporate Environmental Responsibility	All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Steel Plants shall be implemented.	BPSL has implemented all recommendations made in the Charter of Corporate Responsibility for Environment Protection (CREP).
xxvii	Statutory compliance	Rehabilitation and Resettlement Plan for the project affected population including tribal shall be implemented as per the policy of the State Govt. in consultation with the State Govt. of Orissa Compensation paid in	Rehabilitation and resettlement plan for displacement of families has already been implemented as per the policy of Government of Odisha.

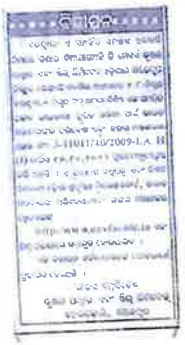
		any case shall not be less than the norms prescribed under the National Resettlement and Rehabilitation Policy,2007.	
xxvii i	Miscellaneous	At least 5% of the total cost of the project shall be earmarked towards the corporate social responsibility and item wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office at Bhubaneswar. Implementation of such program shall be ensured accordingly in a time bound manner.	Company is regularly contributing as per the demand raised by Rehabilitation & Periphery Development Advisory Committee (RPDAC) for taking up various peripheral development works by the District Administration.CSR activities for the year 2023-24 enclosed as **Annexure-XI**
xxix	Human Health Environment	The company shall provide housing for construction labor within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc	Company has setup a separate labour colony for providing shelter to all temporary construction labors. Amenities such as toilets, wash rooms, drinking water, etc. is provided to them at the labour colony. Provision for free medical facility is provided to all workers at companies Occupational Health Center (OHC).

B. General Conditions:

No	Env. Parameter	Condition	Compliance Status
i	Statutory compliance	The project authorities must strictly adhere to the stipulations made by the Orissa pollution Control Board (OPCB) and the State Govt.	All relevant stipulations made by Odisha State Pollution Control Board and state government are being complied
ii	Statutory compliance	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment & Forests.	No expansion or modification has been carried out without prior approval of Ministry of Environment Forest and Climate Change.
iii	Air Quality Monitoring and Preservation	The gaseous emissions from various process unit shall conform to the load/mass based standards notified by this Ministry on 19th May 1993 and standards prescribed from time to time. The Orissa Pollution Control Board (OPCB) may specify more stringent standards for the relevant parameters keeping in view the nature of the industry and its size and location.	• Gaseous emission level from various process conform to the load /mass based standard as notified by the Ministry on 19th May 1993 and standard prescribed from time to time. • Continuous Emission Monitoring systems have been installed in 46 numbers major stacks of DRI, CPP, Iron & Steel making process Units. Stack emission monitoring data for the period Oct'23 to Mar'24 is enclosed as **Annexure-IV**. • In all the existing units adequate pollution control measures to maintain gaseous emission within prescribed standard. The list of Air Pollution control devices installed is enclosed as **Annexure-II.**
iv	Air Quality Monitoring and Preservation	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,	• Four numbers of Continuous Ambient Air Quality Monitoring Stations have been installed within plant. o CAAQMS-1-Near Township o CAAQMS-2 Near Railway Gate o CAAQMS-3-Behind CRM

		SO_2 and NOx are 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 and OPCB, CPCB once in six months.	○ CAAQMS-4-Near ETP • All stations have been establish in consultation with the regional office OSPCB. • The monitoring report is being submitted in the Regional offices of Ministry as well as OSPCB regularly.
v	Air Quality Monitoring and Preservation	In plant control measures for checking fugitive emissions from all the vulnerable sources shall be provided. Further, specific measure like water sprinkling around the coal stockpiles and asphalting or concreting of the roads shall be done to control fugitive emissions.	To have control on fugitive emission following measures have been adopted • Adequate Air Pollution Control devices Equipment installed in all the existing units to maintain emission within limit. List of Pollution Control Devices installed is enclosed as **Annexure-II** • Five numbers of high pressure mist beam has been installed in Raw material handling stock yard area. • Bag Filters and Dry Fog systems are installed in Iron ore crushing and screening areas. • 350 Fixed water sprinkling installed in stock yards, raw material handling areas and internal concrete roads for dust suppression. • 06 numbers of Mobile water sprinkling tankers are being engaged for regular water sprinkling on haul roads and in construction areas for control of fugitive dust emissions. • 08 Mechanized Road sweepers have been engaged for continuous cleaning of concrete roads inside the plant premises to control fugitive dust. • Construction of internal roads is completed • All the conveyors belts and transfer points have been covered and enclosed.
vi	Water Quality Monitoring and Preservation	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 form time to time. The treated waste water shall be utilized for plantation purpose.	• Three numbers of waste water treatment plants are in operation for treatment of waste water generate from the plant. • Effluent Treatment Plant has been installed for treatment of process effluent generated from CRM complex. • Biological ETP has been installed for treatment of effluent generate from Coke Oven-2. • The entire treated water is being used inside the plant in various applications such as ash conditioning, sprinkling, horticulture, firefighting, etc. • The monitoring reports of industrial wastewater are being submitted to SPCB/CPCB/MoEF & CC at regular intervals.
vii	Noise Monitoring & Prevention	The overall noise levels in and around the plant area shall be kept well within the standards (85dBA) by providing noise control measures including accosting hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise	• All the noise prone area such as turbine house and compressor house have been provided with adequate acoustics enclosure and silencer • No employee has been deployed full working hours at noise prone area. Whenever any employee goes for he/she uses earplug/earmuffs.

		levels shall conform to the standards prescribed under EPA Rules,1989 viz.75dB(A)(day time) and 70dB(A)(night time)	• Noise level monitoring report for work zone and Ambient are for the period Oct23 to Mar'24 is enclosed as **Annexure-X (A&B)**
viii	Human Health Environment	Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	• An Occupational Health Centre (OHC) has been setup within the plant for pre-joining and periodical medical check-up of all workers including contract labours. • The OHC is having following facilities for providing health care to employees- • Essential drug delivery through pharmacy. • X ray services for diagnosis of musculoskeletal and internal abnormalities. • Pathology section for conducting bedside diagnosis and disease screening. • ECG facility to rule out cardiac abnormality. • Physiotherapy set up to manage pain and stiffness in musculoskeletal illness and injury. • Minor OT to repair wound and Dressing of wounds and ulcers. • Clinic for diagnosis of common disease and injuries. • Basic and Advanced Ambulance services. • Facility for online training on preventable diseases. • Audiometry Booth for diagnosis of hearing losses. • As per the requirement of Factory Act 1948 all necessary record & documents is maintained.
ix	Miscellaneous	The company shall develop rain water harvesting structures to harvest the rain water for utilization in the lean season besides recharging the ground water table.	M/s KRG Rain water foundation has recently conducted feasibility study in entire complex to assess rainwater harvesting potential and submit feasibility report with detailed plan, expenses, methodology etc. Based on the approved Feasibility report the construction of Rain Water harvesting Structures will be implemented.
x	Corporate Environmental Responsibility	The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP report. Further, the company must undertake socio-economic development activities in the surrounding villages like community development programmes, educational programmes drinking water supply and health care etc. Suggestions made during the public hearing shall be implemented.	• As described in the EIA/EMP report all the Environmental protection measures implemented in the project. BPSL continuously undertaking various community developments activities under its socio-economic development programme. • These included construction /renovation of primary and secondary schools in nearby villages, providing financial assistances to educational institutions, construction of roads, construction of temples, providing drinking water, etc. Company is regularly conducting free health camps in association with District Administration and provide free of cost medicines to the patients.
xi	Miscellaneous	As proposed. Rs.130.00 Crores and 14.00 Crores shall be earmarked towards total capital cost and recurring cost/annum for environmental pollution control	• The funds allocated for installation of pollution control equipment and implementing environmental protection measures is being judiciously utilized to fulfill the conditions stipulated by the Ministry of Environment and Forests as well as State pollution

		measures .All the funds allocated shall be judiciously utilized to implement the conditions stipulated by the Ministry of environment and Forests as well as per the states Government. The funds so provided shall not be diverted for any other purpose.	Control Board.
xii	Statutory compliance	The Regional office of this Ministry at Bhubaneswar/CPCB/OSPCB shall 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 reports along with monitoring data are regularly being submitted at the Regional Office of MoEF&CC as well at OSPCB/CPCB. • Last Six monthly compliance with monitoring report submitted vide letter no-JSWBPSL/ENV/23-24/052 on date 30.11.2023
xiii	Statutory compliance	The project proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the OPCB 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 if 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 copy of the same shall be forwarded to the Regional office at Bhubaneswar.	• Information regarding issue of environmental clearance by the ministry was published in local Odia as well as English newspapers. Copies of the publications are as follows  
xiv	Statutory compliance	A copy of clearance letter shall be sent by the proponent to concerned Panchayat, Zilla Parishad / Municipal Corporation, Urban Local Body and the local NGO, if any from whom suggestions / representations, if any, were received while processing the proposal. The clearance letter shall also be put on the web site of the company by the proponent.	Information regarding issue of environmental clearance by the ministry was given at local panchayat.
xv	Statutory compliance	The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitoring data on their web site and shall update the same periodically. It shall simultaneously be sent to the	• Six monthly compliance status report of the stipulated conditions has been uploaded in company's website https://www.jswbpsl.in/ and same along with monitoring data are regularly being submitted at the Regional Office of MOEF&CC as well at OSPCB/CPCB. • Last compliance report submitted vide letter no JSWBPSL/ENV/23-24/052 on date 30.11.2023

		Regional office of the MOEF, the respective Zonal Office of CPCB and the OPCB. The criteria pollutant levels namely, SPM, RSPM, SO_2, NO_x (ambient levels as well as sack emissions) or critical sectoral parameters like total Organic Compounds (TOC) including cyanide, phenol and COD etc. indicated for the projects shall be monitored and displayed at convenient location near the main gate of the company in the public domain.	• For display of the environmental parameters an electronic board has been installed at the main gate.
xvi	Statutory compliance	The project proponent shall also submit six monthly reports on the status of the compliance of the stipulated environment conditions including results of monitored data (both in hard copies as well as by e-mail) to the respective Regional office of MOEF, the respective Zonal office of CPCB and the SPCB.	Six monthly compliance reports along with monitoring data is being submitted at the Regional Office of MOEF&CC, OSPCB, CPCB regularly. Last six-monthly compliance report was submitted vide letter no- JSWBPSL/ENV/23-24/052 on date 30.11.2023
xvii	Statutory compliance	The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned state pollution control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently shall also be put on the website of the company along with the status of compliance of environmental conditions and shall also be sent to the respective Regional offices of the MOEF by e-mail.	Environmental statement in Form – V is being submitted at OSPCB. Last Environment Statement for the financial year 2022-23 was submitted vide letter no-JSWBPSL/ENV/23-24/040 on dated 19.09.2023.
xviii	Miscellaneous	Project authorities shall inform the Regional office as well 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

COMPLIANCE TO CONDITION LETTER

No.J-11011/40/2009-IA II(I) Dated 02.04.2010 for 2.8 MTPA

A. Specific Conditions:

No	Env. Parameter	Condition Description	Compliance Status
i	Statutory compliance	Compliance to all the specific and general conditions stipulated for the existing plant by the Central/State Govt. shall be ensured and regular reports submitted to the Ministry and its Regional Office at Bhubaneswar.	All the conditions stipulated by Central & State Government Authorities are being complied. Half yearly compliance reports along with monitoring data are being submitted at OSPCB / CPCB & MoEF&CC regularly. Last Six-monthly compliance report was submitted vide letter no-JSWBPSL/ENV/23-24/052 on dated 30.11.2023
ii	Air Quality Monitoring and Preservation	Efforts shall be made to reduce RSPM levels in the ambient air and a time bound action plan shall be submitted. On-line ambient air quality monitoring and continuous stack monitoring facilities for all the stacks shall be provided along with the sufficient air pollution control devices viz. Electrostatic precipitator (ESP),gas cleaning plant cyclone, multi-cyclone, wet scrubber, bag house, bag filters etc. shall be provide to keep the emission levels below 50 mg/Nm^3 by installing energy efficient technology. At no time the emission level shall go beyond the prescribed standards. Interlocking facilities shall be provided so that process can be automatically stopped in case emission level exceeds the limit.	Adequate control measures have been adopted to control RSPM. • Five numbers of high pressure mist beam has been installed in Raw material handling stock yard area. • 06 numbers of Mobile water sprinkling tankers are being engaged for regular water sprinkling on haul roads and in construction areas for control of fugitive dust emissions. • 08 nos. of Mechanized Road sweepers have been engaged for continuous cleaning of concrete roads inside the plant premises to control fugitive dust. • 350 nos. of fixed water sprinkling have been installed in stock yards, raw material handling areas and internal concrete roads for dust suppression. • 04 nos. dedicated dry fog system has been installed in all 04 nos. of wagon tippler. • 04 Numbers of Continuous Ambient Air Quality Monitoring System have been installed within plant in consultation with OSPCB to monitor the Ambient Air Quality. • 46 numbers of Continuous Emission Monitoring systems have been installed in all stacks of DRI, CPP, Iron & Steel making process Units. • Bag Filters and Dry Fog systems are installed in Iron ore crushing and screening areas.

			• Dry BF Gas Cleaning system and bag filters are provided in Blast furnace-1. ESP is provided for in plant de dusting of various units including DRI and Sinter plant. • ESP's are provided in DRI-WHRB, AFBC & CFBC Boilers of CPP and Sinter Plant. • Fumes treatment plant installed at SMS-1 and SMS-2. • Stack emission monitoring data for the period Oct'23 to Mar'24 is enclosed as **Annexure-IV** • A list of Air Pollution Control Devices installed is enclosed as **Annexure–II** • In the event of failure of any pollution control system, automatic interlocking facility has been provided with all units to hold the process and minimize the emission. • In the event of power failure in DRI automatically the DG starts and supply power to auxiliaries, hold the Process and minimize the Emission. • Six monthly monitoring reports are being submitted to MoEFCC, CPCB and SPCB regularly. • High pressure water spray system installed in all truck tipplers to reduce fugitive dust. • 02 nos of additional CAAQMS procured. These are under installation and commissioning.
iii	Air Quality Monitoring and Preservation	As proposed, electrostatic precipitator (ESP) shall be provided to Sinter Plant, WHRB, CFBC, DRI and Slag Cement Plants; bag house to Blast Furnace and ESP & bag filters to by-product recovery type of coke oven to control SPM levels within 50 mg/Nm^3. Fume extraction system with bag filters shall be provided to electric arc furnace and ladle furnace.	As mentioned in our Environment Management Plan ESPs and other Pollution Control systems have been installed to control dust emission in different units. The details are as follows. **DRI/WHRB** There are 12 numbers of ESP installed at the Hot end of the DRI Kiln, 3 numbers ESP and 3 numbers of Bag filter for dedusting system at cold end of the DRI kiln. **Captive Power Plant**: Two numbers of ESP installed at CPP 40 MW and 60MW AFBC Boilers, and 06 nos. of ESP installed in CFBC boilers of 3x130 MW CPP to keep the emission well within the limit **Blast Furnace** One de dusting system have been installed in cast house of Blast furnace -1 followed by Dry Gas cleaning plant. In BF-2 two nos. of dedusting systems have been installed in Cast house and stock house to keep the emission level within the norms. **Coke Oven**

			One dedusting system installed in Coke oven -2 for control of emission. SOPERCO technology is available in Coke Oven-2 to control charging emission. **Steel Melting Shop** Four nos. of fumes extraction and treatment plant along with bag filters have been installed to control the fugitive & process dust emission in the EAF and LF of SMS-I, Similarly in SMS-II one FTP have been installed . In the proposed cement plant adequate pollution control system :Bag filter will be installed.
iv	Air Quality Monitoring and Preservation	Hot gases from DRI kiln shall be passed through Dust Setting Chamber (DCS) to remove coarse solids and after Burning Chambers (ABC) to burn CO completely and used in waste heat recovery boiler (WHRB).The gas then shall be cleaned in ESP before leaving out into the atmosphere through ID fan and stack.	All the DRI Units have been equipped with DCS, ABC followed by independent waste heat recovery boilers (WHRB) for power generation. Independent ESP's have been installed for all the DRI kilns. There are 12 numbers .of ESPs have been installed in the DRI complex.
v	Statutory compliance	All the standards prescribed for the coke oven plants shall be followed as per the latest guidelines, Naphthalene scrubbing unit shall be provided to remove residual naphthalene from coke oven gas. Ammonia released in de-sulphuriziton section of coke oven plant shall be catalytically cracked to Nitrogen and Hydrogen. BF top gas shall be cleaned in dust catcher and gas cleaning plant (GCP) comprising of bag filters and used in furnace of CSP, BF, EAF, sinter plant, lime & dolo plant. Bag filters with adequate stack height shall be provided to lime and dolo plant. Proper and full utilization of coke oven gases in power plant using heat recovery steam generators shall be ensured and no flue gases shall be discharged into the air.	All efforts are being taken to comply with the prescribed standards and guidelines for the coke oven facilities. • The Coke oven-1 is of Non Recovery type. The hot gas of coke oven is being utilized in the power generation passing through waste heat recovery boilers (WHRB) feeding to two numbers of turbo generators which generates 16 MW power. • The Coke Oven Plant -2 (Recovery type) has been installed with adequate pollution control equipment like Pushing & Charging Emission Control system and Bag filter. Stack height has been designed for better dispersion of pollutants. • The byproduct plant is equipped with naphthalene scrubbing unit and Desulphurization unit to remove residual naphthalene from coke oven gas. • The Coke oven gas is being utilized systematically and no flue gas discharged into atmosphere. • BF top Gas is cleaned in dust catcher and Gas cleaning plant and is being used in Tunnel Furnace of CSP, Sinter Plant, Lime/Dolo Plant, SMS, Wire and Rod Mill and Pellet plant.
vi	Statutory compliance	The National Ambient Air Quality Emission Standards issued by the Ministry vide	• The National Ambient Air quality Emission standards issued by the Ministry vide G.S.R No.

		G.S.R No. 826(E) dated 16th November 2009 shall be followed.	826(E) dated 16th November 2009 are being followed. • Monitoring reports for the period Oct'23 to Mar'24 is enclosed as **Annexure-III**
vii	Statutory compliance	All the standards prescribed for the coke oven plants shall be followed as per the latest guidelines. Proper and full utilization of coke oven gases in power plant using heat recovery steam generators shall be ensured and no flue gases shall be discharged into the air.	All the standards prescribed for the coke oven plants are being followed. • In coke oven -1 hot gas is being completely utilized in Waste Heat Recovery Boilers to generate power in 2x8 MW power plant. • In Coke Oven-2 De dusting and Pushing and Charging emission control system have been installed. • SOPERCO technology is available in Coke Oven-2 to control Charging emission. • Biological effluent treatment plant (BETP) have been installed for treatment of effluent generate from byproduct plant. • The clean coke oven gas is being utilized in coke oven battery heating, Tunnel furnace of CSP, Lime/Dolo plant and pellet plant,planned to utilize in CRM . • 100 m3/hr MBR-RO-ZLD project of Coke Oven-2 is under erection phase .
viii	Air Quality Monitoring and Preservation	In-plant control measures for checking fugitive emissions from all the vulnerable sources shall be provided. Bag filters shall be provided at coal mill, intermediate bin/separation building, product storage silo, day bin, iron ore circuit, load out, cooler discharge to control fugitive dust emission. Dust suppression system with water sprinklers shall be provided at raw material stock piles and loading/unloading point. Dust extraction system with bag filters shall be provided at all raw material transfer points, crusher house, junction towers and feed points. All conveyors shall be completely covered by GI sheets. All the roads shall be asphalted to control dust emissions.	Adequate control measures have been adopted to control fugitive dust generation • ESP's are provided in DRI-WHRB (12 nos.), AFBC. (02nos.) & CFBC(06 nos.) Boilers of CPP, Sinter Plant and pellet plant. • 04 no Dry Fog systems installed wagon tippler of RMHS • Fumes treatment plant has been installed at SMS-1(4 nos.) and SMS-2(01 no). • Dry BF Gas Cleaning system and bag filters are provided in Blast furnace-1. ESP is provided for in plant de dusting of various units including DRI and Sinter plant. • Fixed water sprinkler have been installed in stock yards, raw material handling areas and internal Concrete roads for dust suppression. • 05 numbers of high pressure mist beam has been installed in Raw material handling stockyard area. • 06 numbers of Mobile water sprinkling tankers are being engaged for periodical water sprinkling on all the internal roads within the plant premises. • 08 nos. of Mechanized road sweepers have been engaged for continuous cleaning of concrete road inside the plant premises to control fugitive dust.

<table>
<tr><td></td><td></td><td></td><td>

07 nos of additional dedusting system have commissioned in Coke Oven-2 .
High pressure water spray system commissioned in all truck tippler.
156 new rubbish chute has installed to handle spillage and dust.
In the following units Fugitive emission is being monitored and report for the period Oct'23 to Mar'24 is enclosed as Annexure-V

<table>
<tr><th>No</th><th>Name of the units</th><th>Frequency</th></tr>
<tr><td>1</td><td>RMHS</td><td rowspan="9">Once in a month</td></tr>
<tr><td>2</td><td>DRI</td></tr>
<tr><td>3</td><td>Coke Oven</td></tr>
<tr><td>4</td><td>Power Plant</td></tr>
<tr><td>5</td><td>Pellet plant</td></tr>
<tr><td>6</td><td>Sinter plant</td></tr>
<tr><td>7</td><td>Blast Furnace</td></tr>
<tr><td>8</td><td>Steel melting shop</td></tr>
<tr><td>9</td><td>Lime plant</td></tr>
<tr><td>10</td><td>CSP</td><td></td></tr>
<tr><td>11</td><td>CRM</td><td></td></tr>
<tr><td>12</td><td>WRM</td><td></td></tr>
<tr><td>13</td><td>Pipe & Tube plant</td><td></td></tr>
</table>
</td></tr>
<tr><td>ix</td><td>Air Quality Monitoring and Preservation</td><td>Gaseous emission levels including secondary fugitive emissions from all the sources shall be controlled within the latest permissible limits issued by the Ministry and regularly monitored. Guidelines/code of practice issued by it CPCB shall be followed. New standards for the sponge iron plant issued by the Ministry vide G.S.R 414(E) dated 30th May.2008 shall be followed.</td><td>In all the existing units adequate air pollution control devices have been installed to keep gaseous emission within limit. Monitoring Report is attached as Annexure-IV.</td></tr>
<tr><td>x</td><td>Air Quality Monitoring and Preservation</td><td>Vehicular pollution due to transportation of raw material and finished product shall be controlled. Proper arrangements shall also be made to control dust emissions during loading and unloading of the raw material and finished product.</td><td>

Vehicles carrying raw materials and finished products are being covered with tarpaulin.
Water sprinkling arrangement has been made at raw material handling areas to control dust emission during loading and unloading raw materials.
Mobile water sprinkling tankers have been engaged for regular water sprinkling on raw material transporting roads to control fugitive dust.
Five numbers of Wheel washing system have

</td></tr>
</table>

			already been installed to clean the vehicle wheel and control the fugitive dust on road. • One more no of Wheel washing system is under installation.
xi	Water Quality Monitoring and Preservation	Total water requirement from Hirakud Dam shall not exceed 5,500 m^3/hr although 'Permission' for the drawl of 10,194 m^3/hr.water is accorded by the Water Resource Department. Govt. of Orissa vide letter dated 17th June, 2003. Efforts shall further be made to use maximum water from the rain water harvesting sources. As proposed, modified wet quenching system shall be provided to coke oven plant. Air cooled condensers and closed circuit cooling system shall be provided to reduce water consumption and water requirement shall be modified accordingly. All the effluent shall be treated and used for ash handing, dust suppression and green belt development. No effluent shall be discharged and 'Zero' discharge shall be adopted. Sanitary sewages shall be treated in septic tank followed by soak pit and used for green belt development.	• Presently 2713 M3/hr of water drawing from Hirakud Reservoir for our existing operating facilities. • Waste water is being treated in waste water treatment plants (WWTP-1,WWTP-2 and WWTP-3) and treated water reused within plant premises as RO plant feed, for developing green belt, fire fighting, process make up water for coal washery, iron ore beneficiation plant and pellet plant and ash conditioning at captive power plant. • The process effluent CRM is being treated in effluent treatment plant of capacity 1200KLD and effluent from coke oven treated in BETP of capacity 75 M3/hr and reused within plant • All office buildings and plant toilets are provided with individual septic tanks and soak pits. • Three numbers of Sewage treatment plant has been provided of capacity STP-1-700 KLD,STP -2-900 KLD and STP-3-900 KLD for treatment of sewage in township maintain zero discharge. • To achieve ZLD we have installed 510 M3/hr Reverse Osmosis plant for maximize the utilization of the fresh water.
xii	Water Quality Monitoring and Preservation	Effluent treatment plant (ETP) shall be provided for the treatment of Phenolic effluent from coke oven plant and the treated water shall be used for sprinkling at coal stockyard. Clarifier, sludge pond and filter press shall be provided in raw water treatment plant. DM plant water shall be neutralized in neutralization pit and the treated water shall be used for ash handling. Process wastewater shall be recycled /reused in the plant. Cooling tower blow down shall be in the plant for dust suppression and slag granulation, pig casting machine etc. Provision of separate drains for the process and storm water shall be kept.	• The phenolic effluent is being treated in BETP plant and treated effluent is being reused for quenching of hot coke in Coke oven 2. • Neutralization pits have been provided in DM Plant for neutralizing the effluent and treated water is used in ash silos for ash conditioning. • Process effluent/waste water generated from other processes such as Cold Rolling Mill Complex is being treated in Effluent Treatment Plant and treated wastewater is used for sprinkling on haul roads to control fugitive emissions. • Cooling tower blowdown water is being treated is WWTP-1,2 & 3 and utilized for the dust suppression, RO feed, fire fighting, quenching, ore benefication, horticulture use.

xiii	Water Quality Monitoring and Preservation	All the wastewater from the coke oven plant containing, cyanide, phenol and COD etc. Shall be properly treated in the BOD plant. Continuous monitoring of Total Organic compounds (TOC) including cyanide, phenol and COD etc. shall be done at the outlet of ETP (BOD plant) and recovery of products like tar, ammonia, naphthalene etc shall be ensured.	• The Coke Oven -1 is non-recovery type. Water is only used for quenching which is collected in settling tanks and reused in the process of quenching. • The waste water containing cyanide, phenol and COD is being treated in BETP plant and treated effluent is being reused for quenching of hot coke in Coke oven-2. • Online monitoring system have been installed to monitor the treated water quality of the effluent generated from the BETP plant.
xiv	Water Quality Monitoring and Preservation	Efforts shall be made to make use of rain water harvested. If needed, capacity of the reservoir shall be enhanced to meet the maximum water requirement. Only balance water requirement shall be met from other sources.	BPSL has two water reservoirs having capacity 200000 M3 and 134000 M3 which help in rain water harvesting during monsoon. Rain water collecting in these reservoirs are being utilized as replacement of fresh make up water. We have 03 blow down water collection tanks . Rain water is being collected on the empty part of the tank and same is being treated and utilized for ore beneficiation, fire fighting, dust suppression, RO water plant feed water. We have also done feasibility study of rainwater harvesting by M/S KRG foundation. As per the recommendation we will implement the project.
xv	Statutory compliance	'Zero' effluent discharge shall be strictly followed and no wastewater shall be discharged outside the premises.	As a measure of water conservation and also to ensure Zero liquid discharge, For 100% reuse and utilization of treated waste water RO plant of capacity 510 m^3/hr has been installed & the same is in Operation. All the 03 Nos. of existing STP's have been upgraded to meet the prescribed standards. All the STP's are operating satisfactorily. All the effluent water and storm water drains have been segregated throughout the plant.
xvi	Statutory compliance	The water consumption shall not exceed 16 m^3/Ton of Steel as per prescribed standard.	Consumption of water in steel making areas is maintained below the prescribed standard. Specific fresh water consumption of the integrated Steel plant for the year 2023-24 is 2.71 M3/tcs.
xvii	Water Quality Monitoring and Preservation	Regular monitoring of influent and effluent surface, sub surface and ground water shall be ensured and treated wastewater shall meet the norms prescribed by the State Pollution control Board or described under the E (P) Act whichever are more stringent. Leachate study for the effluent generated and analysis shall also be regularly carried out and report submitted to the Ministry's Regional officer at Bhubaneswar, OPCB	• Monitoring of treated effluent, treated waste water and ground water is being monitor regularly. • Analysis report of ground water quality in the surrounding villages is enclosed as **Annexure-VII**. • Treated effluent quality of ETP outlet , treated waste water quality WWTP-1, WWTP-2, WWTP-3 outlets and outlet of BETP for the

<table>
<tr><td></td><td></td><td>and CPCB</td><td>period Oct'23 to Mar'24 is enclosed as Annexure-VI.
• Six monthly compliance with Monitoring reports is being submitted at MoEF&CC, OSCPB and CPCB.
• Last six monthly compliance status with monitoring report was submitted vide letter no-JSWBPSL/MOEF&CC/23-24/052 on dated 30/11/2023</td></tr>
<tr><td>xviii</td><td>Waste Management</td><td>Iron ore fines, process dust, and mill scales shall be recycled to sinter plant to produce sinter. Sludge and slag from electric arc furnace (EAF) shall also be recycled in the sinter plant. Scrap shall be reused in the steel melting shop (SMS).</td><td>• Iron ore fines, process flue dust, mill scales and EAF slag generating in the plant is being recycled through sinter plant & pellet plant.
• Iron ore fines are consumed for making pellets which is further used in DRI Kilns.
All the scraps are being recycled in the Steel melting shop.</td></tr>
<tr><td>xix</td><td>Waste Management</td><td>All the coal fines, char from DRI plant and washery rejects shall be utilized in AFBC boiler of power plant and no char shall be used for briquette making or disposed off anywhere else. AFBC boiler shall be installed simultaneously along with the DRI plant to ensure full utilization of char from the beginning. All the blast furnace (BF) slag shall be granulated and used in manufacturing. Portland slag cement (PSC) in the proposed cement plant. Scrap shall be used in steel melting shop (SMS) EAF & SMS slag kiln accretions shall be properly utilized. All the other solid waste including broken refractory mass kiln accretions shall be properly disposed off in environment friendly manner. Tar sludge from coke oven decanter, waste oil and oil sludge shall be properly disposed as per Hazardous waste (Management & Handling) Rules, 1989 as subsequently amended.</td><td>Details of wastes and utilization
<table>
<tr><th>No</th><th>Waste Description</th><th>Utilization /disposal</th></tr>
<tr><td>01</td><td>Coal fines</td><td>Reused in Captive power plant</td></tr>
<tr><td>02</td><td>DRI char</td><td>Reused in Captive power plant</td></tr>
<tr><td>03</td><td>DRI accretion materials and refractory mass</td><td>Utilized in internal road and low lying area filling</td></tr>
<tr><td>04</td><td>SMS Slag</td><td>Metallic part recovered and residue utilized in road making and land filling</td></tr>
<tr><td>05</td><td>Blast furnace slag</td><td>Entire quantity sold to the Cement plant</td></tr>
<tr><td>06</td><td>Mill scale and Scrap</td><td>Recycled in SMS</td></tr>
</table></td></tr>
<tr><td>xx</td><td>Waste Management</td><td>All the slag shall be used for land filling inside the plant or used as building material only after passing through Toxic chemical Leachability Potential (TCLP) test. Toxic slag shall be disposed in secured landfill as CPCB guidelines. Otherwise hazardous substances shall be recovered from the slag and output waste and be disposed in secured landfill as per CPCB guidelines.</td><td>Metallic part of the slag recovered reused in sinter plant and remaining slag is being used internal road making ,railway ballast etc.</td></tr>
</table>

xxi	Waste Management	Proper utilization of fly ash shall be ensured as per Fly ash Notification, 1999 and subsequent amendment in 2003 & 2010. All the fly ash and BF slag shall be fully utilized in manufacturing of Pozollona Portland Cement (PPC) and Pozollona Slag Cement (PSC)	The ash generated from CPP is being utilized in different area like fly ash brick manufacturing, low lying area filling, embankment rising and quarry void filling. In the year 2023-24 we have utilized 100 % of fly ash generated in our plant. Fly ash is being supplied to 45 numbers of fly ash based brick manufacturing units in and around Jharsuguda, Sambalpur, Sundargarh and Deogarh District of Odisha free of cost with transportation subsidy @150/Ton for maximum utilization of ash. Started utilization of the fly ash in nearby Cement Plant
xxii	Waste Management	Proper handling, storage, utilization and disposal of all the solid waste shall be ensured and regular report regarding toxic, metal content in the waste material and the composition, end use of solid/hazardous waste shall be submitted to the Ministry's Regional Office at Bhubaneswar, OPCB and CPCB.	Proper handling, storage, utilization and disposal of all the solid waste ensured. TCLP study of all the waste done. Annual returns of hazardous waste are being regularly submitted to SPCB Odisha.
xxiii	Waste Management	A time bound action plan shall be submitted for solid waste, its proper utilization and disposal.	Solid waste is disposed as per the action plan specified in our EMP Plan. The solid waste generate from various plant units are being recycled within the plant. Necessary steps are being taken for maximum utilization of Solid waste.
xxiv	Risk Mitigation and Disaster Management	A Risk and Disaster Management Plan along with the mitigation measures shall be prepared and a copy submitted to the Ministry's Regional at Bhubaneswar OPCB and CPCB with in 3 months of issue of environment clearance letter.	Risk and Disaster Management Plan prepared from the very beginning of the plant operation and were submitted at your good office along with our Six monthly compliance reports from time to time with addition of some new units, new hazardous chemicals Revised and up dated risk & Disaster Management Plan along with mitigation measures and the same is followed as and when required. and their inventory changes in key personnel etc. To combat emergency in the plant a dedicated department with all sorts of facilities has been established.
xxv	Greenbelt	As proposed, green belt shall be developed in 430 acres (33%) out of total 1300 acres in and around the plant as per the CPCB guidelines in consultation with DFO.	We have constantly increased every year green coverage areas. We have planted 46173 nos. of saplings during the year 2023-24.
xxvi	Corporate Environmental Responsibility	All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Steel Plants shall be implemented.	BPSL has implemented all recommendations made in the Charter of Corporate Responsibility for Environment Protection (CREP).

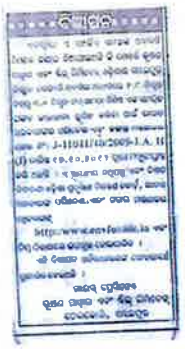
xxvii	Statutory compliance	Rehabilitation and Resettlement Plan for the project affected population including tribal shall be implemented as per the policy of the State Govt. in consultation with the State Govt. of Orissa Compensation paid in any case shall not be less than the norms prescribed under the National Resettlement and Rehabilitation Policy,2007.	Rehabilitation and resettlement plan for displacement of families has already been implemented as per the policy of Government of Odisha.
xxvii i	Miscellaneous	At least 5% of the total cost of the project shall be earmarked towards the corporate social responsibility and item wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office at Bhubaneswar. Implementation of such program shall be ensured accordingly in a time bound manner.	Company is regularly contributing as per the demand raised by Rehabilitation & Periphery Development Advisory Committee (RPDAC) for taking up various peripheral development works by the District Administration.CSR activities for the year 2023-24 enclosed as **Annexure-XI**
xxix	Human Health Environment	The company shall provide housing for construction labor within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc	Company has setup a separate labour colony for providing shelter to all temporary construction labors. Amenities such as toilets, wash rooms, drinking water, etc. is provided to them at the labour colony. Provision for free medical facility is provided to all workers at companies Occupational Health Center (OHC).

B. General Conditions:

No	Env. Parameter	Condition	Compliance Status
i	Statutory compliance	The project authorities must strictly adhere to the stipulations made by the Orissa pollution Control Board (OPCB) and the State Govt.	All relevant stipulations made by Odisha State Pollution Control Board and state government are being complied
ii	Statutory compliance	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment & Forests.	No expansion or modification has been carried out without prior approval of Ministry of Environment Forest and Climate Change.
iii	Air Quality Monitoring and Preservation	The gaseous emissions from various process unit shall conform to the load/mass based standards notified by this Ministry on 19th May 1993 and standards prescribed from time to time. The Orissa Pollution Control Board (OPCB) may specify more stringent standards for the relevant parameters keeping in view the nature of the industry and its size and location.	• Gaseous emission level from various process conform to the load /mass based standard as notified by the Ministry on 19th May 1993 and standard prescribed from time to time. • Continuous Emission Monitoring systems have been installed in 46 numbers major stacks of DRI, CPP, Iron & Steel making process Units. Stack emission monitoring data for the period Oct'23 to Mar'24 is enclosed as **Annexure-IV**. • In all the existing units adequate pollution control measures to maintain gaseous emission within prescribed standard. The list of Air Pollution control devices installed is enclosed as **Annexure-II.**

iv	Air Quality Monitoring and Preservation	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 NOx are 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 and OPCB, CPCB once in six months.	• Four numbers of Continuous Ambient Air Quality Monitoring Stations have been installed within plant. o CAAQMS-1-Near Township o CAAQMS-2 Near Railway Gate o CAAQMS-3-Behind CRM o CAAQMS-4-Near ETP • All stations have been establish in consultation with the regional office OSPCB. • The monitoring report is being submitted in the Regional offices of Ministry as well as OSPCB regularly.
v	Air Quality Monitoring and Preservation	In plant control measures for checking fugitive emissions from all the vulnerable sources shall be provided. Further, specific measure like water sprinkling around the coal stockpiles and asphalting or concreting of the roads shall be done to control fugitive emissions.	To have control on fugitive emission following measures have been adopted • Adequate Air Pollution Control devices Equipment installed in all the existing units to maintain emission within limit. List of Pollution Control Devices installed is enclosed as **Annexure-II** • Five numbers of high pressure mist beam has been installed in Raw material handling stock yard area. • Bag Filters and Dry Fog systems are installed in Iron ore crushing and screening areas. • 350 Fixed water sprinkling installed in stock yards, raw material handling areas and internal concrete roads for dust suppression. • 06 numbers of Mobile water sprinkling tankers are being engaged for regular water sprinkling on haul roads and in construction areas for control of fugitive dust emissions. • 08 Mechanized Road sweepers have been engaged for continuous cleaning of concrete roads inside the plant premises to control fugitive dust. • Construction of internal roads is completed • All the conveyors belts and transfer points have been covered and enclosed.
vi	Water Quality Monitoring and Preservation	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 form time to time. The treated waste water shall be utilized for plantation purpose.	• Three numbers of waste water treatment plants are in operation for treatment of waste water generate from the plant. • Effluent Treatment Plant has been installed for treatment of process effluent generated from CRM complex. • Biological ETP has been installed for treatment of effluent generate from Coke Oven-2. • The entire treated water is being used inside the plant in various applications such as ash conditioning, sprinkling, horticulture, firefighting, etc. • The monitoring reports of industrial wastewater are being submitted to SPCB/CPCB/MoEF & CC at regular intervals.

vii	Noise Monitoring & Prevention	The overall noise levels in and around the plant area shall be kept well within the standards (85dBA) by providing noise control measures including accosting hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under EPA Rules,1989 viz.75dB(A)(day time) and 70dB(A)(night time)	• All the noise prone area such as turbine house and compressor house have been provided with adequate acoustics enclosure and silencer • No employee has been deployed full working hours at noise prone area. Whenever any employee goes for he/she uses earplug/earmuffs. • Noise level monitoring report for work zone and Ambient are for the period Oct23 to Mar'24 is enclosed as **Annexure-X (A&B)**
viii	Human Health Environment	Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	• An Occupational Health Centre (OHC) has been setup within the plant for pre-joining and periodical medical check-up of all workers including contract labours. • The OHC is having following facilities for providing health care to employees- • Essential drug delivery through pharmacy. • X ray services for diagnosis of musculoskeletal and internal abnormalities. • Pathology section for conducting bedside diagnosis and disease screening. • ECG facility to rule out cardiac abnormality. • Physiotherapy set up to manage pain and stiffness in musculoskeletal illness and injury. • Minor OT to repair wound and Dressing of wounds and ulcers. • Clinic for diagnosis of common disease and injuries. • Basic and Advanced Ambulance services. • Facility for online training on preventable diseases. • Audiometry Booth for diagnosis of hearing losses. • As per the requirement of Factory Act 1948 all necessary record & documents is maintained.
ix	Miscellaneous	The company shall develop rain water harvesting structures to harvest the rain water for utilization in the lean season besides recharging the ground water table.	M/s KRG Rain water foundation has recently conducted feasibility study in entire complex to assess rainwater harvesting potential and submit feasibility report with detailed plan, expenses, methodology etc. Based on the approved Feasibility report the construction of Rain Water harvesting Structures will be implemented.
x	Corporate Environmental Responsibility	The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP report. Further, the company must undertake socio-economic development activities in the surrounding villages like community development programmes, educational programmes drinking water supply and health care etc. Suggestions made during the public	• As described in the EIA/EMP report all the Environmental protection measures implemented in the project. BPSL continuously undertaking various community developments activities under its socio-economic development programme. • These included construction /renovation of primary and secondary schools in nearby villages, providing financial assistances to educational institutions, construction of roads, construction of temples, providing drinking water, etc. Company is regularly conducting free health camps in association with District Administration and provide free of cost

		hearing shall be implemented.	medicines to the patients.
xi	Miscellaneous	As proposed. Rs.130.00 Crores and 14.00 Crores shall be earmarked towards total capital cost and recurring cost/annum for environmental pollution control measures .All the funds allocated shall be judiciously utilized to implement the conditions stipulated by the Ministry of environment and Forests as well as per the states Government. The funds so provided shall not be diverted for any other purpose.	• The funds allocated for installation of pollution control equipment and implementing environmental protection measures is being judiciously utilized to fulfill the conditions stipulated by the Ministry of Environment and Forests as well as State pollution Control Board.
xii	Statutory compliance	The Regional office of this Ministry at Bhubaneswar/CPCB/OSPCB shall 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 reports along with monitoring data are regularly being submitted at the Regional Office of MoEF&CC as well at OSPCB/CPCB. • Last Six monthly compliance with monitoring report submitted vide letter no-JSWBPSL/ENV/23-24/052 on date 30.11.2023
xiii	Statutory compliance	The project proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the OPCB 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 if 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 copy of the same shall be forwarded to the Regional office at Bhubaneswar.	• Information regarding issue of environmental clearance by the ministry was published in local Odia as well as English newspapers. Copies of the publications are as follows  
xiv	Statutory compliance	A copy of clearance letter shall be sent by the proponent to concerned Panchayat, Zilla Parishad / Municipal Corporation, Urban Local Body and the local NGO, if any from whom suggestions / representations, if any, were received while processing the proposal. The clearance letter shall	Information regarding issue of environmental clearance by the ministry was given at local panchayat.

		also be put on the web site of the company by the proponent.	
xv	Statutory compliance	The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitoring data on their web site and shall update the same periodically. It shall simultaneously be sent to the Regional office of the MOEF, the respective Zonal Office of CPCB and the OPCB. The criteria pollutant levels namely, SPM, RSPM, SO_2, NO_x (ambient levels as well as sack emissions) or critical sectoral parameters like total Organic Compounds (TOC) including cyanide, phenol and COD etc. indicated for the projects shall be monitored and displayed at convenient location near the main gate of the company in the public domain.	• Six monthly compliance status report of the stipulated conditions has been uploaded in company's website https://www.jswbpsl.in/ and same along with monitoring data are regularly being submitted at the Regional Office of MOEF&CC as well at OSPCB/CPCB. • Last compliance report submitted vide letter no JSWBPSL/ENV/23-24/052 on date 30.11.2023 • For display of the environmental parameters an electronic board has been installed at the main gate.
xvi	Statutory compliance	The project proponent shall also submit six monthly reports on the status of the compliance of the stipulated environment conditions including results of monitored data (both in hard copies as well as by e-mail) to the respective Regional office of MOEF, the respective Zonal office of CPCB and the SPCB.	Six monthly compliance reports along with monitoring data is being submitted at the Regional Office of MOEF&CC, OSPCB, CPCB regularly. Last six-monthly compliance report was submitted vide letter no- JSWBPSL/ENV/23-24/052 on date 30.11.2023
xvii	Statutory compliance	The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned state pollution control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently shall also be put on the website of the company along with the status of compliance of environmental conditions and shall also be sent to the respective Regional offices of the MOEF by e-mail.	Environmental statement in Form – V is being submitted at OSPCB. Last Environment Statement for the financial year 2022-23 was submitted vide letter no-JSWBPSL/ENV/23-24/040 on dated 19.09.2023.

xviii	Miscellaneous	Project authorities shall inform the Regional office as well 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

COMPLIANCE TO CONDITIONS OF LETTER
No.J-11011/372/2006-IA II (I) Dated-29.03.2007 for 2.2 MTPA

A. Specific Condition:

No	Env. Parameter	Condition	Compliance status
i	Air Quality Monitoring and Preservation	The gaseous emissions from various process units shall conform to the load/mass based standards notified by this Ministry on 19thMay, 1993 and standards prescribed from time to time. The State Board may specify more stringent standards for the relevant parameters keeping in view in 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 stack emission monitoring for all the major stacks will be carried out and reports submitted to the OSPCB & CPCB. The emission levels from all the sources shall be kept below 100 mg/Nm^3.Interlocking facilities shall be provided so that process can be automatically stopped in case emission level exceeds the limit.	• Gaseous emission level from various processes conforms to the load /mass based standard as notified by the Ministry on 19th May 1993 and standard prescribed from time to time. • Continuous Emission Monitoring systems have been installed in 46 numbers major stacks of DRI, CPP, Iron & Steel making process Units. List of Continuous emission Monitoring System enclose as **Annexure-I** • Stack emission monitoring data for the period Oct23' to Mar'24 is enclosed as **Annexure-IV.** • In all the existing units adequate pollution control measures have been installed to maintain gaseous emission within prescribed standard. • The list of Air Pollution Control devices installed is enclosed as **Annexure-II** • In the event of power failure in DRI automatically the DG starts and supply power to auxiliaries, hold the process and minimize the emission.
ii	Statutory compliance	Continuous online ambient air quality monitoring stations shall be set-up at three locations around the project site and reports submitted to the OSPCB & CPCB.	Four numbers of Continuous Ambient Air Quality Monitoring Stations have been installed within plant. . o CAAQMS-1-Near Township o CAAQMS-2 Near Railway Gate o CAAQMS-3-Behind CRM o CAAQMS-4 -Near ETP • All stations have been established in consultation with the regional office OSPCB. • Ambient Air Quality Monitoring data for the period Oct23 to Mar'24 is enclosed as **Annexure – III**
iii	Air Quality Monitoring and Preservation	In plant control measures for checking fugitive emissions from all the vulnerable sources shall be provided. Dust suppression system shall be provided to coal/raw material stockpiles. Bag house shall be provided to BF-dry cleaning system. Bag filters shall be provided to fume extraction system, RMP Crusher etc. ESP shall be provided to Pellet Plant, DRI Kilns, BF stock house, Sinter Plant, DRI – WHRB Stacks, AFBC, CFBC, Lime Plant Kiln, Dolo Plant Kiln and Ferro-Alloy Plant. Dry fog dust suppression system shall be provided to BF cast house. Further, specific measures like water sprinkling shall be carried out at the coal yard, wagon tippler and truck tippler etc. Fugitive emissions shall	Adequate control measures have been adopted to control fugitive dust generation. • ESP's have been provided in DRI-WHRB (12 nos.), AFBC (02nos.) & CFBC (06 nos.) Boilers of CPP, Sinter Plant and pellet plant. • Fumes treatment plant has been installed at SMS-1 (4 nos.) and SMS-2(01 no). • Dry BF Gas Cleaning system and bag filters have be provided in Blast furnace-1. • ESP has been provided for in plant de dusting of various units including DRI and Sinter plant. • Details of Air pollution Control Devices installed is enclosed as **Annexure-II.** • 350nos.of fixed water sprinkler have been installed in stock yards, raw material handling

<table>
<tr><td></td><td></td><td>be controlled, regularly monitored and records maintained.</td><td>areas and internal Concrete roads for dust suppression.
• Five numbers of high pressure mist beam has been installed in Raw material handling stockyard area.
• Six numbers of Mobile water sprinkling tankers are being engaged for periodical water sprinkling on all the internal roads within the plant premises.
• Eight numbers of Mechanized road sweepers have been engaged for continuous cleaning of concrete road inside the plant premises to control fugitive dust.
• In the following units fugitive emission is being monitored and report for the period Oct'23 to Mar'24 is enclosed as Annexure-V.
<table><tr><th>No</th><th>Name of the units</th><th>Frequency of monitoring</th></tr><tr><td>1</td><td>RMHS</td><td rowspan="9">Once in Month</td></tr><tr><td>2</td><td>DRI</td></tr><tr><td>3</td><td>Coke Oven</td></tr><tr><td>4</td><td>Captive Power Plant</td></tr><tr><td>5</td><td>Pellet plant</td></tr><tr><td>6</td><td>Sinter plant</td></tr><tr><td>7</td><td>Blast furnace</td></tr><tr><td>8</td><td>Steel melting shop</td></tr><tr><td>9</td><td>Lime plant</td></tr></table></td></tr>
<tr><td>iv</td><td>Water Quality Monitoring and Preservation</td><td>Total requirement of the water from Hirakud Reservoir shall not exceed 93,252 m^3/day as per the permission accorded by the Department of Water resources, Govt. of Orissa. All the treated wastewater shall be recycled & reuse either in the premises or for green belt development. No effluent shall be discharged outside the premises and "Zero" discharge shall be adopted. Domestic wastewater shall be treated in septic tank followed by soak pits.</td><td>• Presently 2713 M3/hr of water drawing from Hirakud Reservoir for our existing operating facilities.
• Waste water is being treated in waste water treatment plants (WWTP-1,WWTP-2 and WWTP-3) and treated water reused within plant premises for developing green belt, fire fighting, process make up water for coal washery, iron ore beneficiation plant and pellet plant and ash conditioning at captive power plant.
• The process effluent CRM is being treated in effluent treatment plant of capacity 1200 KLD and effluent from coke oven treated in BETP of capacity 75 M3/hr and reused within plant
• All office buildings and plant toilets are provided with individual septic tanks and soak pits.
• Three numbers of Sewage treatment plant has been provided of capacity STP-1-700 KLD,STP -2-900 KLD and STP-3-900 KLD for treatment of sewage in township maintain zero discharge.
• To achieve ZLD we have installed 510 M3/hr Reverse Osmosis plant for maximize the</td></tr>
</table>

<table>
<tr><td></td><td></td><td></td><td>utilization of the treated water</td></tr>
<tr><td>v</td><td>Water Quality Monitoring and Preservation</td><td>Ground water monitoring around the solid waste disposal site/ secure landfill (SLF) shall be carried out regularly and report submitted to the Ministry's Regional Office at , CPCB and OSPCB.</td><td>Ground water monitoring in the surroundings villages and solid waste disposal area is regularly done. Report of ground water analysis is enclosed as Annexure – VII</td></tr>
<tr><td>vi</td><td>Waste Management</td><td>Slag from BF shall be granulated and sold to cement plants. SMS slag from IF, EAF and LF shall be used for internal road making and filling low lying areas. Scrap from SMS shall be recycled in the steel plant. Scale and debris from CSP and rolling mill shall be reused in the sinter plant itself. Dust from DRI, Pellet Plant and SMS shall be recycled to sinter plant. No char shall be disposed off and efforts shall be made to use in AFBC boiler.</td><td>Details of Solid waste utilization is as follows.
<table>
<tr><th>No</th><th>Units</th><th>Solid waste</th><th>Utilization</th></tr>
<tr><td>01</td><td>BF</td><td>BF Slag</td><td>The entire slag generating from BF is granulated and sold to cement manufacturers.</td></tr>
<tr><td>02</td><td>SMS</td><td>SMS slag</td><td>Slag is being crushed and the metallic content is recovered and recycled through Sinter Plant .The residue after recovery is used for internal road making and in leveling of low lined areas in the plant.</td></tr>
<tr><td>03</td><td>DRI</td><td>Char</td><td>Char generate from DRI unit is blended with coal and used in AFBC and CFBC boilers of Captive Power plant</td></tr>
<tr><td>04</td><td>CSP & Rolling Mill</td><td>Scales & derbies from CSP and Rolling mill</td><td>Scales and debris generating from rolling mill and SMS is recycled in Sinter Plant</td></tr>
<tr><td>05</td><td>Different Units</td><td>Scrap</td><td>Recycled In Steel melting shop</td></tr>
</table></td></tr>
<tr><td></td><td>Waste Management</td><td>Possibilities shall be explored regarding use of Fly Ash from AFBC, CFBC boilers of CPP by cement and brick-manufacturing units in the nearby areas. Ash shall be utilized as per the 10 years action plan submitted. Bottom Ash shall be disposed off in a suitable designated landfill as per CPCB guidelines to prevent leaching to the sub-soil and underground aquifer.</td><td>• The ash generated from CPP is being utilized in different area like fly ash brick manufacturing, low lying area filling, embankment rising and quarry void filling. In the year 2023-24 we have utilized 100 % of fly ash generated in our plant.
• Fly ash is being supplied to 45 numbers of fly ash based brick manufacturing units in and around Jharsuguda, Sambalpur, Sundargarh and Deogarh District of Odisha free of cost with transportation</td></tr>
</table>

vii			subsidy @150/Ton for maximum utilization of ash. • Adequate protection is provided at the bottom of the landfill area to prevent any leaching to the sub soil and underground aquifer.
viii	Water Quality Monitoring and Preservation	The company shall develop rainwater harvesting structure to harvest the rain water for utilization in the lean season besides recharging the ground water table.	BPSL has two water reservoirs having capacity 200000 M3 and 134000 M3 which help in rain water harvesting during monsoon. M/s KRG Rain water foundation has recently conducted feasibility study in entire complex to assess rainwater harvesting potential and submit feasibility report with detailed plan, expenses, methodology etc. Based on the approved feasibility report the construction of Rain Water harvesting Structures will be implemented.
ix	Greenbelt	Green belt of adequate width and density shall be provided to mitigate the effects of fugitive emission in at least 462 acres out of total 1,721 acres of land in and around the plant as per the CPCB guidelines in consultation with DFO.	We have constantly increases every year green coverage areas. We have planted 46173 nos. of saplings in Oct' 23 to Mar'24
x	Human Health Environment	Occupational Health Surveillance of the worker shall be done on a regular basis and records maintained as per the Factories Act. The company shall install CO detectors to detect leakage of CO from the BF. Cardiopulmonary Resuscitation facilities and mediated Oxygen cylinder facilities shall be provided.	• An Occupational Health Centre (OHC) has been setup within the plant for pre-joining and periodical medical check-up of all workers including contract labours. • The OHC is having following facilities for providing health care to employees- • Essential drug delivery through pharmacy. • X ray services for diagnosis of musculoskeletal and internal abnormalities. • Pathology section for conducting bedside diagnosis and disease screening. • ECG facility to rule out cardiac abnormality. • Physiotherapy set up to manage pain and stiffness in musculoskeletal illness and injury. • Minor OT to repair wound and Dressing of wounds and ulcers. • Clinic for diagnosis of common disease and injuries. • Basic and Advanced Ambulance services. • Facility for online training on preventable diseases. • Audiometry Booth for diagnosis of hearing losses. • As per the requirement of Factory Act 1948 all necessary record & documents are maintained

xi	Corporate Environmental Responsibility	All the recommendation of the Charter of Corporate Responsibility for Environmental Protection (CREP) issued for the integrated Iron and Steel Sectors shall be implemented.	Recommendations made in the Charter of Corporate Responsibility for Environment Protection (CREP) are being implemented as per the guidelines laid for Integrated Iron & Steel Sector.
B	**General Conditions:**		
i	Statutory compliance	The project authorities must strictly adhere to the stipulations made by the Orissa pollution Control Board (OSPCB) and the State Govt.	All relevant stipulations made by Odisha State Pollution Control Board and state government are being complied.
ii	Statutory compliance	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment & Forests.	No expansion or modification has been carried out without prior approval of Ministry of Environment Forest and Climate Change.
iii	Air Quality Monitoring and Preservation	At least four ambient air quality monitoring stations shall be established in the down wind direction, as well as where max. Ground level concentrations of SPM, SO2 & NOx are anticipated in consultation with OSPCB. Data on ambient air quality and stack emissions should be regularly submitted to this Ministry including its Regional Office and the OSPCB/Central Pollution Control Board once in six months.	Four numbers of Continuous Ambient Air Quality Monitoring Stations have been installed within plant. . o CAAQMS-1-Near Township o CAAQMS-2 Near Railway Gate o CAAQMS-3-Behind CRM o CAAQMS-4-Near ETP All stations have been established in consultation with the regional office OSPCB. Ambient Air Quality Monitoring data for the period Oct'23 to Mar'24 is enclosed as **Annexure – III**

<table>
<tr>
<td>IV</td>
<td>Water Quality Monitoring and Preservation</td>
<td>Industrial waste water shall be properly collected, treated so as to conform to the standards prescribed under GSR (E) dated 19th May, 1993 and 31st December, 1993 or as amended from time to time. The treated waste water should be utilized for plantation purpose.</td>
<td>Details of Waste water/effluent Treatment facilities
<table>
<tr><th>No</th><th>Name of facility</th><th>Capacity</th></tr>
<tr><td>1</td><td>Waste water Treatment plant-1</td><td>750 M3/hr</td></tr>
<tr><td>2</td><td>Waste water Treatment plant-2</td><td>750 M3/hr</td></tr>
<tr><td>3</td><td>Waste water Treatment plant-2</td><td>750 M3/hr</td></tr>
<tr><td>4</td><td>Effluent treatment Plant-CRM</td><td>1200KLD</td></tr>
<tr><td>5</td><td>Biological Effluent Treatment Plant at Coke Oven-2</td><td>75 M3/hr</td></tr>
<tr><td>6</td><td>Sewage Treatment Plant-1</td><td>700 KLD</td></tr>
<tr><td>7</td><td>Sewage Treatment Plant-2</td><td>900 KLD</td></tr>
<tr><td>8</td><td>Sewage Treatment Plant-3</td><td>900 KLD</td></tr>
<tr><td>9</td><td>Reverse Osmosis Plant</td><td>510 M3/hr</td></tr>
</table>
The entire treated water is being used inside the plant in various applications such as ash conditioning, sprinkling, horticulture, fire fighting etc.
Analysis report of treated Effluent of effluent Treatment Plant (ETP) ,BETP & waste water of WWTP-1 ,WWTP-2 WWTP-3 for the period of Oct'23 to Mar'24 is enclosed as Annexure-VI</td>
</tr>
<tr>
<td>v</td>
<td>Noise Monitoring & Prevention</td>
<td>The overall noise levels in and around the plant area shall be kept well within the standards 85 dB(A) 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 EPA Rules ,1989 viz 75 dBA (daytime) and 70 dBA (nighttime)</td>
<td>All the noise prone area such as turbine house and compressor house have been provided with adequate acoustics enclosure and silencer

No employee has been deployed full working hours at noise prone area. Whenever any employee goes for he/she uses earplug/earmuffs.

Noise level monitoring report for work zone and Ambient are for the period Oct'23 to Mar'24 is enclosed as Annexure-X(A&B)</td>
</tr>
<tr>
<td>vi</td>
<td>Corporate Environmental Responsibility</td>
<td>The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA / EMP report. Further, the company must undertake socio-economic development activities in the surrounding villages like community development programmes, educational programmes, drinking water supply and healthcare etc.</td>
<td>Environmental protection measures & safeguards recommended in EIA /EMP report are being complied.

Socio-economic development activities/programmes like supply of drinking water, health care camps and community development programmes are being carried out on regular basis and will be continued as per plan</td>
</tr>
</table>

vii	Statutory compliance	As mentioned in the EIA/EMP, Rs. 440.00 Crores and Rs. 55.0 crores earmarked towards the capital cost and recurring cost/annum for environmental pollution control measures shall be judiciously utilized to implement the conditions stipulated by the Ministry of Environment and Forests as well as State Government. The funds so provided shall not be diverted for any other purpose.	The funds allocated for installation of pollution control equipments and implementing environmental protection measures has been judiciously utilized to fulfill the conditions stipulated by the Ministry of Environment and Forests as well as the State pollution Control Board. We ensure that funds earmarked for the environmental protection measures has not diverted for any other purpose.
viii	Statutory compliance	The Regional Office of this Ministry at / Central Pollution Control Board /Orissa State Pollution Control Board will monitor the stipulated conditions. A six monthly compliance report and monitored data along with statistical interpretation shall be submitted them regularly.	Six monthly compliance reports along with monitored data are regularly submitted at the Regional Office of MoEF&CC as well as at OSPCB/CPCB. The last six-monthly report was submitted on dated 30th November 2023.
ix	Statutory compliance	The project proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the Orissa State Pollution Control Board / 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.	Information regarding issue of environmental clearance by the ministry was published in local newspapers.  ବିଜ୍ଞାପନ Edited, Printed, Published & Owned by Bijna Ranjan Mi Published at Pt. L.N. Mishra Lane, Sambalpur **News Paper Publication for 1.2 to 2.2 MTPA**
x	Statutory compliance	The Project Authorities should 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 date of commencing the land development work.	Complied

COMPLIANCE TO CONDITIONS OF LETTER
No.J-11011/228/2003-IA II Dated-12.05.2004 for 1.2 MTPA

Specific Condition:

No	Env. Parameter	Condition Description	Compliance Status
i	Air Quality Monitoring and Preservation	The gaseous and particulate emissions from various process units shall conform to standards prescribed by the state pollution Control Board. The company shall take appropriate measures to achieve the load /mass based standards prescribed from time to time . The State Board may specify more stringent standards for the relevant parameters keeping in view in the nature of the industry and its size and location. At no time the emission level shall exceed the prescribed standards. In the event of failure of any pollution control system adopted by the unit, the respective unit shall not be restarted until the control measures are rectified to achieve the desired efficiency.	Gaseous emission level from various processes conforms to the load /mass-based standard as notified by the Ministry on 19th May 1993 and standard prescribed from time to time. In all the existing units adequate pollution control measures have been installed to maintain gaseous emission within prescribed standard. In the event of power failure in DRI automatically the DG starts and supply power to auxiliaries, hold the process and minimize the emission.
ii	Air Quality Monitoring and Preservation	In plant control measures for checking fugitive emissions from spillages, handling of raw materials and product shall be provided. Further specific measures such as ESP based dedusting system for sponge Iron plant, ESPs for DRI Kilns. Ventury scrubber and clarifier for BF stove gas cleaning , bag filters for BF dedusting stack. Bag filter for induction furnace, electric arc furnace and ladle furnace, ESPs for CPP and bag filter for raw material crusher area shall be provided. Data on fugitive emissions shall be regularly monitored and records maintained, Continuous stack monitoring system shall be installed in major stacks.	• Adequate control measures have been adopted to control fugitive dust generation. • ESP's have been provided in DRI-WHRB (12 nos.), AFBC (02nos.) & CFBC (06 nos.) Boilers of CPP, Sinter Plant and pellet plant.. • Fumes treatment plant has been installed at SMS-1 (4 nos.) and SMS-2(01 no). • Dry BF Gas Cleaning system and bag filters have been provided in Blast furnace 1. • ESP has been provided for in plant de dusting of various units including DRI and Sinter plant. • Details of Air pollution Control Devices installed is enclosed as **Annexure-II**. • 350nos.fixed water sprinkler have been installed in stock yards, raw material handling areas and internal Concrete roads for dust suppression. • Five numbers of high pressure mist beam has been installed in Raw material handling stockyard area. • 06 numbers of Mobile water sprinkling tankers are being engaged for periodical water sprinkling on all the internal roads within the plant premises.

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<td></td>
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<td>• 08 numbers of mechanized road sweepers have been engaged for continuous cleaning of concrete road inside the plant premises to control fugitive dust.
• In the following units fugitive emission is being monitored and report for the period Oct'23 to Mar'24 is enclosed as Annexure-V.
<table>
<tr><th>No</th><th>Name of the units</th><th>Frequency of monitoring</th></tr>
<tr><td>1</td><td>RMHS</td><td rowspan="9">Once in Month</td></tr>
<tr><td>2</td><td>DRI</td></tr>
<tr><td>3</td><td>Coke Oven</td></tr>
<tr><td>4</td><td>Captive Power Plant</td></tr>
<tr><td>5</td><td>Pellet plant</td></tr>
<tr><td>6</td><td>Sinter plant</td></tr>
<tr><td>7</td><td>Blast furnace</td></tr>
<tr><td>8</td><td>Steel melting shop</td></tr>
<tr><td>9</td><td>Lime plant</td></tr>
</table>
</td>
</tr>
<tr>
<td>iii</td>
<td>Water Quality Monitoring & Preservation</td>
<td>The plant shall be based on zero discharge concept. There shall be no discharge of effluent, which shall be fully recycled. As reflected in the EIA/EMP report the waste water from raw water treatment plant and filter backwash water ,after taking through settling tanks ,shall be used for moistening of ash, cooling of slag and horticulture. The DM water plant effluent shall also be taken to settling tank after neutralization .Cooling tower blow down shall be reused for service water system .Water from coal washery shall be treated in thickener and its overflow reused in the plant. The domestic waste water from township after treatment in STP shall be used for greenbelt development.</td>
<td>Presently 2713M3/hr of water drawing from Hirakud Reservoir for our existing operating facilities. Details of Wastewater/effluent Treatment facilities is as follows
<table>
<tr><th>No</th><th>Name of facility</th><th>Capacity</th></tr>
<tr><td>01</td><td>Waste water Treatment plant-1</td><td>750 M3/hr</td></tr>
<tr><td>02</td><td>Waste water Treatment plant-2</td><td>750 M3/hr</td></tr>
<tr><td>03</td><td>Waste water Treatment plant-2</td><td>750 M3/hr</td></tr>
<tr><td>04</td><td>Effluent treatment Plant-CRM</td><td>50m3/hr</td></tr>
<tr><td>05</td><td>Biological Effluent Treatment Plant</td><td>75 M3/hr</td></tr>
<tr><td>06</td><td>Sewage Treatment Plant-1</td><td>700 KLD</td></tr>
<tr><td>07</td><td>Sewage Treatment Plant-2</td><td>900 KLD</td></tr>
<tr><td>08</td><td>Sewage Treatment Plant-3</td><td>900 KLD</td></tr>
<tr><td>09</td><td>Reverse Osmosis Plant(feed)</td><td>510 M3/hr</td></tr>
</table>
The waste water is being treated in waste water treatment plants (WWTP-1,WWTP-2 and WWTP-3) and treated water reused within plant premises for developing green belt, fire fighting, process make up water for, iron ore beneficiation plant and pellet plant and ash conditioning at captive power plant.</td>
</tr>
</table>

<table>
<tr><td></td><td></td><td></td><td>• The process effluent CRM is being treated in effluent treatment plant of capacity 1200 KLD and effluent from coke oven treated in BETP of capacity 75 M3/hr and reused within plant.
• All office buildings and plant toilets are provided with individual septic tanks and soak pits.
• Three numbers of Sewage treatment plant has been provided for treatment of sewage in township maintain zero discharge.
• In our endeavor to achieve Zero liquid discharge Reverse Osmosis plant of capacity 510 m3/hr has been installed and in operation.</td></tr>
<tr><td>iv</td><td>Waste Management</td><td>As reflected in the EIA/EMP report, solid waste generated in the form of slag from blast furnace(12800 TPA) shall be collected in the earmarked slag dump area and sold to cement plants, SMS slag from induction furnace and electrical arc furnace (183000TPA) shall be used for land filling or boulder, soling of roads, Scrap from SMS and other areas shall be recycled to the maximum possible extent .Dust from DRI unit and SMS shall be recycled or sold to outside parties. Ash from DR kilns and CPP shall be collected in earmarked ash dump areas, and provided to brick and cement manufacturers or used for back filling of abandoned mines.</td><td>Details of Solid waste
<table>
<tr><th>No</th><th>Units</th><th>Solid waste</th><th>Utilization</th></tr>
<tr><td>01</td><td>BF</td><td>BF Slag</td><td>The entire slag generating from BF is granulated and sold to cement manufacturers.</td></tr>
<tr><td>02</td><td>SMS</td><td>SMS slag</td><td>Slag is being crushed and the metallic content is recovered and recycled through Sinter Plant .The residue after recovery is used for internal road making and in leveling of low lined areas in the plant.</td></tr>
<tr><td>03</td><td>DRI</td><td>Char</td><td>Char generate from DRI unit is blended with coal and used in AFBC and CFBC boilers of Captive Power plant</td></tr>
<tr><td>04</td><td>CSP & Rolling Mill</td><td>Scales & derbies from CSP and Rolling mill</td><td>Scales and debris generating from rolling mill and SMS is recycled in Sinter Plant</td></tr>
<tr><td>05</td><td>Different Units</td><td>Scrap</td><td>Recycled In Steel melting shop</td></tr>
</table></td></tr>
</table>

v	Corporate Environmental Responsibility	All the recommendation of the Charter of Corporate Responsibility for Environmental Protection (CREP) for the integrated Iron and Steel Sectors shall be strictly implemented.	Recommendations made in the Charter of Corporate Responsibility for Environment Protection (CREP) are being implemented as per the guidelines laid for Integrated Iron & Steel Sector.
vi	Greenbelt	Green belt of adequate width and density shall be provided to mitigate the effects of fugitive emission all around the plant. A minimum 25% of the area shall be developed as green belt with local species in consultation with the DFO and as per CPCB's guidelines.	We have constantly increased every year green coverage areas. We have planted 46173 nos. of tree in in the year 2023-24
vii	Water Quality Monitoring & Preservation	The company shall undertake rainwater harvesting measures to harvest the rain water for their won utilization as well as to recharge the ground water table.	BPSL has two water reservoirs having capacity 200000 M3 and 134000 M3 which help in rain water harvesting during monsoon Based on the approved Feasibility report the construction of Rain Water harvesting Structures will be implemented.
viii	Human Health Environment	Occupational Health Surveillance of the worker shall be done on a regular basis and records maintained as per the Factories Act. The company shall install CO detectors to detect leakage of CO from the MBF. Cardiopulmonary Resuscitation facilities and mediated Oxygen cylinder facilities shall be provided.	• An Occupational Health Centre (OHC) has been setup within the plant for pre-joining and periodical medical check-up of all workers including contract labours. • The OHC is having following facilities for providing health care to employees- • Essential drug delivery through pharmacy. • X ray services for diagnosis of musculoskeletal and internal abnormalities. • Pathology section for conducting bedside diagnosis and disease screening. • ECG facility to rule out cardiac abnormality. • Physiotherapy set up to manage pain and stiffness in musculoskeletal illness and injury. • Minor OT to repair wound and Dressing of wounds and ulcers. • Clinic for diagnosis of common disease and injuries. • Basic and Advanced Ambulance services. • Facility for online training on preventable diseases. • Audiometric Booth for diagnosis of hearing losses.

<table>
<tr><td></td><td></td><td></td><td>• As per the requirement of Factory Act 1948 all necessary record & documents are maintained.</td></tr>
<tr><td>ix</td><td>Statutory compliance</td><td>The company shall obtain necessary approvals for diversion of 59 ha of forest land from the concerned agencies.</td><td>Both stage–I and Stage–II clearance granted for diversion of 59 ha of forest Land.</td></tr>
<tr><td>B</td><td colspan="3">General Conditions:</td></tr>
<tr><td>No</td><td>Env. Parameter</td><td>Condition Description</td><td>Compliance Status</td></tr>
<tr><td>i</td><td>Statutory compliance</td><td>The project authorities shall strictly adhere to the stipulation made by the Orissa Pollution Control Board and the State Government</td><td>All relevant stipulations made by Odisha State Pollution Control Board and state government are being complied.</td></tr>
<tr><td>iii</td><td>Air Quality Monitoring & Preservation</td><td>At least four ambient air quality monitoring stations shall be established in the down wind direction, as well as where max. Ground level concentrations of SPM, SO2 & NOx are anticipated in consultation with OSPCB. Data on ambient air quality and stack emissions should be regularly submitted to this Ministry including its Regional Office and the OSPCB/Central Pollution Control Board once in six months.</td><td>Four numbers of Continuous Ambient Air Quality Monitoring Stations have been installed within plant. .
o CAAQMS-1-Near Township
o CAAQMS-2 Near Railway Gate
o CAAQMS-3-Behind CRM
o CAAQMS-4-Near ETP
All stations have been established in consultation with the regional office OSPCB.
Ambient Air Quality Monitoring data for the period Oct '23 to Mar24 is enclosed as Annexure – III</td></tr>
<tr><td>IV</td><td>Water Quality Monitoring & Preservation</td><td>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.</td><td>Details of Waste water/effluent Treatment facilities
<table>
<tr><th>No</th><th>Name of facility</th><th>Capacity</th></tr>
<tr><td>1</td><td>Waste water Treatment plant-1</td><td>750 M3/hr</td></tr>
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<tr><td>8</td><td>Sewage Treatment Plant-3</td><td>900 KLD</td></tr>
<tr><td>9</td><td>Reverse Osmosis Plant</td><td>510 M3/hr</td></tr>
</table>
The entire treated water is being used inside the plant in various applications such as ash</td></tr>
</table>

			conditioning, sprinkling, horticulture, fire fighting etc. Analysis report of treated Effluent of effluent Treatment Plant (ETP) ,BETP & waste water of WWTP-1 ,WWTP-2 WWTP-3 for the period of Oct'23 to Mar'24 is enclosed as **Annexure-VI**
v	Noise Monitoring & Prevention	The overall noise levels in and around the plant area shall be kept well within the standards 85 dB(A) 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 EPA Rules ,1989 viz 75 dB A (daytime) and 70 dB A (nighttime)	All the noise prone area such as turbine house and compressor house have been provided with adequate acoustics enclosure and silencer . No employee has been deployed full working hours at noise prone area. Whenever any employee goes for he/she uses earplug/earmuffs. Noise level monitoring report for work zone and Ambient are for the period Oct'23 to Mar'24 is enclosed as **Annexure-X(A&B)**
vi	Human Health Environment	Proper housekeeping and adequate occupied health programmers shall be taken up. Occupational health surveillance program shall be done on a regular basis and records maintained.	• For proper House keeping 5s system implemented in the plant • An Occupational Health Centre (OHC) has been setup within the plant for pre-joining and periodical medical check-up of all workers including contract labours. • The OHC is having following facilities for providing health care to employees- • Essential drug delivery through pharmacy. • X ray services for diagnosis of musculoskeletal and internal abnormalities. • Pathology section for conducting bedside diagnosis and disease screening. • ECG facility to rule out cardiac abnormality. • Physiotherapy set up to manage pain and stiffness in musculoskeletal illness and injury. • Minor OT to repair wound and Dressing of wounds and ulcers. • Clinic for diagnosis of common disease and injuries. • Basic and Advanced Ambulance services. • Facility for online training on preventable diseases. • Audiometry Booth for diagnosis of hearing losses. • As per the requirement of Factory Act 1948 all necessary record & documents are maintained.

vii	Corporate Environmental Responsibility	The company shall comply with all the environment protection measures and safeguards recommended in the EIA/EMP report. Further, the company shall undertake socio-economic development activities in the surrounding villages like community development programmers, educational programmers, drinking water supply and health care etc	All the Environmental protection measures as suggested in EIA/EMP report have been implemented. • BPSL continuously undertaking various community developments activities under its social economic development programme. • These included construction /renovation of primary and secondary schools in nearby villages, providing financial assistances to educational institutions, construction of roads, construction of temples, providing drinking water in the periphery villages etc. • Company is regularly conducting free health camps in association with District Administration and provide free of cost medicines to the patients.
viii	Miscellaneous	A separate environmental management cell with full fledged laboratory facilities to carry out various management and monitoring function should be set up under the control of senior executive.	A full-fledged Environment Management Department is being operated to carry out various monitoring & control function related with Environment and sustainability headed by Senior Executive. Apart from that a NABL accredited third party engaged for monitoring of Environmental Parameter.
ix	Miscellaneous	The project authorities shall provide adequate funds recurring and non-recurring to implement the conditions stipulated by the Ministry of Environment and Forest 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 any other purposes.	The funds allocated for installation of pollution control equipment and implementing environmental protection measures has been judiciously utilized to fulfill the conditions stipulated by the Ministry of Environment and Forests as well as the State pollution Control Board. We ensure that funds earmarked for the environmental protection measures has not diverted for any other purpose.
x	Statutory compliance	The Regional Office of this Ministry at Bhubaneswar/ Central Pollution Control Board/State Pollution Control Board 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 reports along with monitored data are regularly being submitted at the Regional Office of MoEF & CC as well as at OSPCB/CPCB. The last six-monthly report submitted on date 30th November 2023.

xi	Statutory compliance	The company shall inform the public that the project has been accorded environmental clearance by the ministry and copies of the clearance letter are available with the state Pollution Control Board/Committee and may also be seen at website of the Ministry of Environment & Forests at http:/envfor.nic.in This shall be advertised within seven days from the state of issue of clearance letter, at least in two local newspaper 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 should be forwarded to the Regional Office.	Information regarding issue of environmental clearance by the ministry was published in local newspapers.
xii	Statutory compliance	The 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

LIST OF ATTACHMENT/ANNEXURES

Attachment No	Description
Attachment-1	Compliance Status based on Monitoring report No 101-595/22/EPE dated 16.09.22 from IRO, MoEF& CC, Bhubaneswar
Attachment-2	Status of Action plans per MoEF&CC.O.M. Dated.30/09/2020

Annexure No	Description
Annexure-I	List of CEMS
Annexure-II	List of Air Pollution Control Devices
Annexure-III	Ambient Air Quality Monitoring Result (Oct'23 to Mar'24)
Annexure-IV	Stack Monitoring Result (Oct'23 to Mar'24)
Annexure-V	Fugitive Emission Monitoring Result (Oct'24 to Mar'24)
Annexure-VI	Treated Effluent Analysis Result (Oct'23 to Mar'24)
Annexure-VII	Ground Water Quality Result
Annexure-VIII	List of Solid Waste
Annexure-IX	CSR Activity (Oct'23 to Mar'24)
Annexure-X (A&B)	Work Zone & Ambient Noise Monitoring Result (Oct'23 to Mar'23)

Attachment-1

Compliance Status based on Monitoring report No 101-595/22/EPE dated 16.09.22 from IRO, MoEF& CC, Bhubaneswar

Sl. No	Observation	Compliance Status
01	The project authorities are requested to provide information on the R&R plan to this office along with the implementation schedule	The information has been submitted bearing our letter no-JSWBPSL/ENV/MoEF& CC/027 dated-27/11/2023
02	Progress made with respect to proposed rainwater harvesting system may be submitted to this office.	BPSL has two fresh water reservoirs having capacity 200000 m3 and 134000 M3. Rain water collecting in these reservoirs are being utilized as replacement of fresh make up water. We have 03 blowdown water collection tanks . Rain water is being collected on the empty part of the tank and same is being treated and utilized for ore beneficiation, fire fighting, dust suppression, RO water plant feed water. We have also done feasibility study of rainwater harvesting by M/S KRG foundation. As per the recommendation we will implement the project.
03	All the roads within the plants have been damaged due to weathering and movement of vehicles. The roads within the plant area need to be made concrete or black topped for reducing the fugitive emission. For reducing dispersion of the dust from the roads it is viewed that the project authorities after metaling the roads may use the air of vacuum cleaners which will sweep the roads intermittently through mechanized means. All the roads should have the facility for spraying of water through jets so as to reduce fugitive emission (Specific condition No-vii)	We have converted internal mud road to concrete road of 46 KM. 08 nos. of mechanized road vacuum sweepers have been engaged for cleaning of roads on 24*7 hours of operation. 03 nos. of multiutility vehicle has been engaged for sprinkling, high pressure water jet cleaning, fire fighting, mist canon and tree washing facility.

04	An action plan along with implementation schedule for the installation of reverse osmosis plant, which is reported to be under commissioning stage for utilization of 100% treated effluent /waste along with CETP, which is to be installed for collection and treatment of wastewater. (specific condition No-xii)	Currently Zero Liquid Discharge status is being maintained. As per commitment, a new ETP of capacity 1200 KLD has been commissioned in Cold Rolling Mill in place of old ETP .
05	The status of compliance the commitments made to the public during public Hearing /Public consultation meeting should be submitted to the office (specific condition No.xix)	The action plan already submitted. Maximum points attended and some pending points are under implementation.
06	It is requested that information on expenditure towards enterprise social commitment and constitution of committee should be submitted to this office (specific condition no.xx and xxii)	All the details submitted.
07	Detected information on the CSR activities carried out should be submitted along with budgetary provision(specific condition no.xxi)	In line with the policy of CSR, JSW Foundation, which is the apex body for carrying out CSR activities in the JSW Group is carrying out the need based assessment with involvement of stake holders and implementing the activities in phases. The CSR expenditure for the period Oct23 to Mar'24 enclosed as **Annexure-IX**
08	It has been observed that during the lunch hours the workers in the plant are taking their lunch along with the road sides under the tree sheds. The project authorities may contemplate on constructing facilities with proper lighting and aeration and sitting space for the workforce to have their lunch and relaxation with better facilities. (specific condition no.xxv)	Facilities has been provided within the existing plant area for taking lunch and relaxation for the worker.
09	Housekeeping needs improvement within plant	Regular mechanized cleaning of roads through 08 no of Road sweeper and mechanized housekeeping facility. The introduction of 5-S system has made significant improvement in workplace environment.
10	Plantation of trees in all the vacant areas and also along with road side	Tree plantation along the roads, within the open area within the plant has been completed.

	may be taken up bay the project authorities.	Action plan for balance plantation in the adjoining area has been submitted to complete 33% greenbelt by 2024-25.
11	Details of occupational health surveillance carried out in last year should be provided along with findings ,if any ,need to be submitted to this office (General Condition No-vi)	Executive Health check up is being conducted in Apollo Hospital and M/S Vikash Hospital for the employees on a yearly basis. Also in house testing facility has developed in Occupational health center and same is being conducted for the employee, associates and contractor on a half yearly basis.
12	A detailed water budget of the plant should be submitted to this office.	Specific fresh water consumption for the steel plant achieved for FY 24 is 2.71 m3/ tcs and for power plant the specific fresh water consumption is 2.4 m3/MWH.
13	It is requested to submit information on development of rain water harvesting structure to this office (General condition No-vii)	BPSL has two fresh water reservoirs having capacity 200000 m3 and 134000 M3. Rain water collecting in these reservoirs are being utilized as replacement of fresh make up water. We have 03 blowdown water collection tanks . Rain water is being collected on the empty part of the tank and same is being treated and utilized for ore beneficiation, fire fighting, dust suppression, RO water plant feed water. We have done feasibility study of rainwater harvesting By KRG foundation. As per the recommendation we will implement the project. Recharging of ground water not feasible due to high level of groundwater tables, due to vicinity of Bheden River.
14	It is requested to submit detailed information (item wise)on the expenditure for environmental pollution control measures(General condition No-ix)	Submitted. The budget has not been diverted for other purposes.
15	The url address of the company's website regarding uploading of monthly reports should be submitted to this office (Genera condition No.xi)	Environment compliance uploaded on website viz http://www.jswbpsl.in/compliances.html and CSR information uploaded on website viz http://www.jswbpsl.in/csr.html. Status will be updated regularly
16	A copy of the environmental statement in form V should be submitted to this office (General condition no-xiii)	http://www.jswbpsl.in/compliances.html. Environment Statement for the 22-23 has submitted on 19th September23
17	It is requested that the date of financial closure, final approval and date of commencing of the land development work of the project should be submitted to this office	Financial closure for 4.5 MTPA will be submitted

Attachment – 2

STATUS OF ACTION PLAN AS PER MoEF&CC, O.M. DATED 30/09/2020.

Sl. No.	Area	Year 2022	Year 2023	Year 2024	Total Budget In Crores	Status of Implementation as on 30.09.2023
1	Road Infrastructure	Construction of road in Derba (Repairing 3 km) and Thelkoloi service road (1km)	Construction of road in Sripura (2 km) and Khadiapalli (1km)	Construction of road in Dubhenchaper (3 km) and Lapanga (1km)	7.0	Thelkoloi Service Road Repairing has been Completed Repairing of Road at Derba is under construction Construction of Road at Lapanga is under construction Roads at Sripura, Khariapali & Dubhenchaper has been completed
2	Rainwater harvesting	Construction of village pond at Lapanga	Construction of village pond at Dhubenchapper	Construction of village pond at Khariapalli	1.5	Construction/Renovation of village pond at Lapanga has been completed. Construction/Renovation of village pond at Dhubenchapper is Complete. Construction/Renovation of village pond at Khadiapali is Complete. In addition, waterbody development was conducted at following ponds as well: a. Brahmanpada Pond, Thelkoloi b. Chuhuri Pond, Dhubenchhapal c. Bansimal Pond,

						Bansimal d. Binova Nagar Pond, Lapanga e. Rohidaspada Pond, Lapanga f. Saharapada Pond g. Khadiapali Pond, Khadiapali h. Neru Pond, Banjberna i. Banjiberna Pond, Banjiberna j. Dantamura Pond k. Landupali Pond l. Old Khinda Pond m. Das Pond, Lapanga n. Jugipali Pond, Salad o. Barikpali Pond, Salad p. Ghuhuri Kata Pond, Sripura q.Talipada Pond, Derba r. Kumdapada Pond, Derba s. Gountiyapada Pond, Dhubenchhapal t. Ramchandrapur Pond, Sripura u. Gariakata Pond, Sripura v. Nagamata Pond Thelkoloi x. Kinaloi Pond y. Tabdabahal Pond
3	Healthcare facilities	Healthcare facility for local people in vicinity of the plant to address respiratory, skin, ENT issues etc. related to environmental pollution – Commencement of construction	Completion of construction	Procurement of equipment and engagement of medical staff (operational expenditure like staff salary and consumables to be borne by BPSL)	30.0	Mobile medical unit is operational in the peripheral villages. Company has setup a dispensary at Thelkoloi Village for community. The dispensary is operational. In addition, the company has established 1st Trauma Care Center of Western Odisha at

		of building				District Headquarter Hospital, Jharsuguda in partnership with District Administration for the benefit of critical cases.
4	Drinking water & sanitation	Allocation of funds towards government drinking water mission and Sanitation in the close vicinity. The approved programmed would be communicated to MoEFCC through 6 monthly compliance report	-	-	5.0	We are providing drinking water through tankers to 10 nos. of peripheral villages and will continue to provide the same till Har Ghar Jal Yojana is implemented by Govt under "Har Ghar Jal Yojna", schedule to be done end 2024. Water Sanitation & Hygiene (WaSH) Programme in convergence with Dist. Govt. is operational focusing on following aspects, 1. Establishment of Piped Drinking Water Facilities in Village 2. Ensuring ODF+ Villages 3. Solid Waste Management

5	Vocational training arrangements for women and youth	Vocational training courses arrangements for women through various Govt departments/ NGOsTailoring, beautician and mushroom cultivation etc. - 200 women Vocational Training courses for local youth through local ITIs for following trade Electrician, Welder Fitter Electrician Mason Moto winding Machining etc for about 100 local youth	Tailoring, beautician and mushroom cultivation course - additional 200 women Electrician, welding, fitting and machining course for additional 100 local youth	Tailoring, beautician and mushroom cultivation course - additional 200 women Electrician, welding, fitting and machining course for additional 100 local youth.	1.7	Skill training center on Tailoring has been established at Thelkoloi Village for the women of peripheral villages. Women trained will be attached to the upcoming sewing production unit. Skill training on other livelihood program (Mushroom, Poultry, Floriculture, Fishery etc.) is under progress under Holistic Livelihood program.
6	Education	Strengthening of village school library – 4 Nos. of PCs and 500 books with bookshelves to Thekoloi Hugh School and Dhubenchapper upper Primary school, Sripura High School & Bir Surendra Sai High School	Strengthening of village school library – 4 Nos. of PCs and 500 books with bookshelves to Strengthening of village school library – 4 Nos. of PCs and 500 books with bookshelves to Bisadhi Upper Thekoloi Upper Primary School,	Strengthening of village school library – 4 Nos. of PCs and 500 books with bookshelves to Bisadhi Upper Primary School, Bir Surendra Sai Upper Primary School, Lapanga Upper Primary	3.0	Renovation of following schools are complete: Thelkoloi High School is complete. Construction is under progress for additional section. Dhubenchapper Primary School. Sripura Primary & Middle School Bisadihi Primary School Thelkoloi Upper Primary School

			Lapanga High School, Saraswati Sishu Vidya Mandir & Sripura Upper Primary School	School & Sripura Upper Primary School		Lapanga High School Lapanga Primary & Upper Primary School Saraswati Sishu Vidya Mandir School In addition, renovation of other peripheral schools done at Lapanga & Gihcamura panchayat. Library setup in 12 schools has been done. Partnership with GoO for MO school civil/ Infrastructural development for 60 schools of Sambalpur.
7	Electrification/ Solar Street Lighting	Solar LED lights at Lapanga, Thelkoloi - 50 each village	Solar LED lights at Dhubenchapper, Derba - 50 each village	Solar LED lights at Khariapalli, Khinda - 50 each village	1.8	Installation of Solar LED lights under progress. Installation Status till Mar'24: Lapanga GP – 33 Nos. Thelkoloi GP – 37 Nos. Ghichamura GP – 14 Nos. Khinda GP– 4 Nos. Installation in other areas: Bomaloi GP – 4 Nos. Hirma GP – 4 Nos.
				TOTAL	**50.0**	

Annexure - I

List of Continuous Emission Monitoring System

No	Station Id	Location	Parameter
1	CEMS-1	DRI-WHRB-1 Stack	PM
2	CEMS-2	DRI-WHRB-2 Stack	PM
3	CEMS-3	DRI-WHRB-3 Stack	PM
4	CEMS-4	DRI-WHRB-4 Stack	PM
5	CEMS-5	DRI-WHRB-5 Stack	PM
6	CEMS-6	DRI-WHRB-6Stack	PM
7	CEMS-7	DRI-WHRB-7Stack	PM
8	CEMS-8	DRI-WHRB-8Stack	PM
9	CEMS-9	DRI-WHRB-9 Stack	PM
10	CEMS-10	DRI-WHRB-10 Stack	PM
11	CEMS-11	DRI-WHRB-11 & 12 Stack	PM
12	CEMS-12	DRI-Dedusting 1&2 Stack	PM
13	CEMS-13	DRI-Dedusting 3&4 Stack	PM
14	CEMS-14	DRI-Dedusting 5&6 Stack	PM
15	CEMS-15	DRI-Dedusting 7&8 Stack	PM
16	CEMS-16	DRI-Dedusting 9 &10 Stack	PM
17	CEMS-17	DRI-Dedusting11&12 Stack	PM
18	CEMS-18	CPP 3x130MW UNIT-1	PM,SO2,NOx,Hg
19	CEMS-19	CPP 3x130MW UNIT-2	PM,SO2,NOx,Hg
20	CEMS-20	CPP 3x130MW UNIT-3(CFBC-5)	PM,SO2,NOx,Hg
21	CEMS-21	CPP3x130 MW Unit-3 (CFBC-6)	PM,SO2,NOx,Hg
22	CEMS-22	CPP 60 MW Stack	PM,SO2,NOx,Hg
23	CEMS-23	CPP 40 MW Stack	PM,SO2,NOx,Hg
24	CEMS-24	SMS-1 FTP-1	PM
25	CEMS-25	SMS-1 FTP-2	PM
26	CEMS-26	SMS-1 FTP-3	PM
27	CEMS-27	SMS-1 FTP-4	PM
28	CEMS-28	SMS-2 FTP	PM
29	CEMS-29	Pellet Plant processStack	PM,SO2,NOx
30	CEMS-30	Pellet Plant Dedusting	PM,
31	CEMS-31	Coke Oven -1 Stack-1	PM,SO2,NOx,CO
32	CEMS-32	Coke Oven-1 Stack-2	PM,SO2,NOx,CO
33	CEMS-33	Coke Oven -2 Process stack	PM ,SO2,NOx,CO
34	CEMS-34	Coke Oven -2 Dedusting Stack	PM
35	CEMS-35	BF-2 Casthouse Bagfilter Stack	PM,SO2,NOx,CO
36	CEMS-36	BF-2-Bagfilter connected to Stock House	PM
37	CEMS-37	BF-1Casthouse bagfilter stack	PM
38	CEMS-38	BF-1 GCP stack	PM
39	CEMS-39	Sinter plant-1 Charging Stack	PM,SO2,NOx
40	CEMS-40	Sinterplant-1 Discharging stack	PM
41	CEMS-41	Sinter plant-2 Process Stack	PM
42	CEMS-42	Sinter plant-2 Dedusting Stack	PM
43	CEMS-43	LCP-1 Stack	PM
44	CEMS-44	LCP-2 Stack	PM
45	CEMS-45	LCP-3 Stack	PM
46	CEMS-46	LCP-4 Stack	PM

Annexure-II

List of Air Pollution Control Device

S.N	Name Of the Unit	Pollution Control System	Capacity in (NM3/hr)	Stack height in mtr
DRI Plant				
1.	DRI/WHRB-1	Electro Static Precipitator	120000	76
2	DRI/WHRB-2	Electro Static Precipitator	120000	76
3	DRI/WHRB-3	Electro Static Precipitator	120000	76
4	DRI/WHRB-4	Electro Static Precipitator	120000	76
5	DRI/WHRB-5	Electro Static Precipitator	250000	76
6	DRI/WHRB-6	Electro Static Precipitator	250000	76
7	DRI/WHRB-7	Electro Static Precipitator	280000	76
8	DRI/WHRB-8	Electro Static Precipitator	280000	76
9	DRI/WHRB-9	Electro Static Precipitator	280000	76
10	DRI/WHRB-10	Electro Static Precipitator	280000	76
11	DRI/WHRB-11	Electro Static Precipitator	210000	76
12	DRI/WHRB-12	Electro Static Precipitator	210000	76
13	DRI Dedusting-5&6	Electro Static Precipitator	250000	45
14	DRI Dedusting 7&8	Electro Static Precipitator	250000	45
15	DRI De dusting 9&10	Electro Static Precipitator	350000	45
16	DRI De dusting 1&2	Bag filter	350000	45
17	DRI De dusting 3&4	Bag filter	350000	45
18	DRI De dusting 11&12	Bag filter	350000	45
Captive Power Plant				
19	CPP 40 MWAFBC-1	Electro Static Precipitator	143000	76
20	CPP 60 MWAFBC-2	Electro Static Precipitator	286000	95
21	CPP 3x130 MW Unit-1 CFBC-1	Electro Static Precipitator with hybrid Bag filter	650000	120
22	CPP 3x130 MW Unit-1 CFBC-2	Electro Static Precipitator	650000	120
23	CPP 3x130 MW Unit-2 CFBC-3	Electro Static Precipitator	650000	120
24	CPP 3x130 MW Unit-2 CFBC-4	Electro Static Precipitator	650000	120
25	CPP 3x130 MW Unit-3 CFBC-5	Electro Static Precipitator	650000	120
26	CPP 3x130 MW Unit-3 CFBC-6	Electro Static Precipitator	650000	120
Blast Furnace-1				
27	BF-Dry gas cleaning	Bag House, Gas Cleaning Plant	180000	30
28	BF-Cast house	Dust catcher Bag filter	220000	45
Blast Furnace-2				
29	BF-Stock House	Bag filter	610000	45
30	BF-Cast House	Bag filter	850000	45
Sinter Plant-1				
31	Sinter Plant Charging	Electro Static Precipitator	570000	75
32	Sinter plant Discharging	Electro Static Precipitator	450000	40

33	Sinter plant Dedusting	Electro Static Precipitator	190000	40
34	Sinter plant De dusting (Propertional Buiding)	Electro Static Precipitator	190000	40
Sinter plant -2				
35	Sinter plant Process	Electro static Precipitator	700000	120
36	Sinter plant Dedusting	Electro static Precipitator	600000	60
Coke Oven -2				
37	Pushing Emission Control System	De dusting System (Bag filter)	504000	45
Steel Melting Shop-1				
38	SMS-1 EAF& LF -1	Fume Treatment Plant-1 (Bag House)	15000000	45
39	SMS-1 EAF&LF-2	Fume Treatment Plant-1 (Bag House)	15000000	45
40	SMS-1 EAF&LF-3	Fume Treatment Plant-3(Bag House)	14310000	45
41	SMS EAF&LF-4	Fume Treatment Plant-4(Bag House)	14310000	45
Steel Melting Shop-2				
42	SMS-2 EAF & LF	Fumes Treatment Plant(Bag House)	2328000	45
RMHS				
43	Crushing & Screening areas of RMPP-1 Ore circuit	09 nos. of Bag Filter & Dry Fog System	50000	30
Lime & Dolo Plant				
44	Lime Plant-1	Bag Filter	50000	50
45	Lime Plant-2	Bag Filter	50000	50
46	Lime Plant-3	Bag Filter	50000	50
47	Lime plant- 4	Bagfilter	120000	49
CRM Complex				
48	Acid Regeneration Plant	Wet Scrubbers	11530	34
49	Pickling Plant	Wet Scrubbers	15716	32
Wire Rod & Bar Mill				
50	Re heating furnace	De dusting System/Bag filter	10000	85
51	De dusting	De dusting System/Bag filter	15000	34
Pellet Plant				
52	Wind box	Electro Static Precipitator	984000	45
53	Hood Exhaust	Electro Static Precipitator	420000	45
54	De dusting	Electro Static Precipitator	240000	45

Annexure-III

Summary of Ambient Air Quality
Monthly Average Value

Ambient Air Quality Monitoring Station -1 Near Township							
Month	Pollutant	PM_{10}	$PM_{2.5}$	SO_2	NO_X	O_3	CO
	Standard	100 ($\mu g/m^3$)	60 ($\mu g/m^3$)	80 ($\mu g/m^3$)	80 ($\mu g/m^3$)	100($\mu g/m^3$)	2 ($\mu g/m^3$)
October-23		57.90	42.80	21.50	42.4	6.5	0.94
November-23		54.40	37.20	21.80	37.3	8.2	0.45
December-23		58.50	40.80	22.70	38.8	9.50	0.48
January-24		63.60	38.60	21.10	27	5	0.37
February-24		56.20	42.70	29.00	35.3	5.8	0.47
March-24		62.40	37.50	28.40	32.5	6.4	0.52
Ambient Air Quality Monitoring Station -2 Near Railway Gate							
Month	Pollutant	PM_{10}	$PM_{2.5}$	SO_2	NO_X	O_3	CO
	Standard	100 ($\mu g/m^3$)	60 ($\mu g/m^3$)	80 ($\mu g/m^3$)	80 ($\mu g/m^3$)	100 ($\mu g/m^3$)	2 ($\mu g/m^3$)
October-23		62.20	40.50	24.50	42.10	7.90	0.51
November-23		60.40	41.10	19.38	34.90	7.40	0.41
December-23		60.10	35.80	21.30	32.40	6.80	0.37
January-24		58.50	37.20	23.80	32.80	6.20	0.36
February-24		57.70	41.70	27.80	31.70	4.70	0.35
March-24		56.00	42.40	24.60	33.60	4.50	0.39
Ambient Air Quality Monitoring Station -3 Behind CRM							
Month	Pollutant	PM_{10}	$PM_{2.5}$	SO_2	NO_X	O_3	CO
	Standard	100 ($\mu g/m^3$)	60 ($\mu g/m^3$)	80 ($\mu g/m^3$)	80 ($\mu g/m^3$)	100 ($\mu g/m^3$)	2 ($\mu g/m^3$)
October-23		58.60	46.50	27.10	40.1	5.5	0.2
November-23		60.30	42.8	25.4	36.6	6.2	0.34
December-23		58.80	42.8	25.4	36.6	6.2	0.34
January-24		58.70	50.2	29.4	25.1	5.3	0.34
February-24		59.20	53	25.7	23.2	4.9	0.38
March-24		60.80	48.4	24.60	28.7	5.9	0.42

Ambient Air Quality Monitoring Station -4 Near ETP							
Month	Pollutant	PM_{10}	$PM_{2.5}$	SO_2	NO_X	O_3	CO
	Standard	100 ($\mu g/m^3$)	60 ($\mu g/m^3$)	80 ($\mu g/m^3$)	80 ($\mu g/m^3$)	100 ($\mu g/m^3$)	2 ($\mu g/m^3$)
October-23		60.80	40.8	24.2	44.1	6.9	0.51
November-23		56.50	36.7	22.5	41.3	5.4	0.63
December-23		62.50	36.7	25.5	41.3	5.4	0.63
January-24		60.00	38.1	25.5	28.9	5.7	0.55
February-24		53.9	43.8	20.9	25.3	5.6	0.51
March-24		62	37.2	23.7	27.1	5.9	0.56

Annexure-IV

Stack Monitoring Report

Period from Oct-23 to Mar-24

S.N.	Units	Stack Name		[Particulate Matter (mg/Nm3)]					
			Standard mg/Nm3	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24
1	DRI	DRI/WHRB-1	50.00	12.20	15.16	Shot Down	20.10	40.70	Shot Dow
2		DRI/WHRB-2	50.00	14.20	13.59	21.00	19.70	45.00	10.60
3		DRI/WHRB-3	50.00	45.80	45.80	14.80	15.40	26.40	36.27
4		DRI/WHRB-4	50.00	19.80	12.28	36.80	39.20	26.40	10.95
5		DRI/WHRB-5	50.00	23.10	10.55	33.00	41.10	39.70	41.00
6		DRI/WHRB-6	50.00	14.90	16.40	25.60	19.10	12.70	13.63
7		DRI/WHRB-7	50.00	15.40	23.60	45.00	19.80	18.40	18.40
8		DRI/WHRB-8	50.00	19.50	22.70	40.20	46.40	14.80	25.76
9		DRI/WHRB-9	50.00	16.71	27.10	20.50	14.10	18.60	Shot Dow
10		DRI/WHRB-10	50.00	18.80	26.30	22.10	17.20	19.51	38.60
11		DRI/WHRB-11&12	50.00	37.00	22.70	45.20	22.40	48.00	11.46
12		DRI De-dusting 1&2	50.00	11.62	20.31	29.40	36.30	22.10	30.67
13		DRI De-dusting 3&4	50.00	42.80	12.87	46.60	48.60	45.60	34.49
14		DRI De-dusting 5& 6	50.00	31.60	39.00	35.60	23.00	25.00	41.93
15		DRI De-dusting 7&8	50.00	48.60	31.01	31.10	31.29	18.50	36.58
16		DRI De-dusting 9&10	50.00	45.50	19.28	25.13	21.10	22.10	39.50
17		DRI De-Dusting 11&12	50.00	37.00	24.70	47.10	47.90	48.80	29.35
18	CPP	CPP 3X130 MW Unit 1	50.00	33.50	49.70	42.70	46.00	22.90	14.50
19		CPP 3X130 MW Unit 2	50.00	47.50	41.30	43.40	30.30	34.30	11.39
20		CPP 3X130 MWUnit-3 CFBC 5	50.00	10.59	46.30	24.34	38.80	28.00	30.76
21		CPP3X130 MW Unit-3 CFBC 6	50.00	45.60	40.20	26.81	34.50	48.30	43.74
22		CPP 60 MW	50.00	14.72	30.70	21.50	34.50	39.60	10.10
23		CPP40 MW	50.00	10.76	38.60	27.80	28.50	28.30	25.35
24	SMS-1	FTP-1	50.00	16.40	19.40	16.99	27.30	15.50	11.30
25		FTP-2	50.00	19.20	21.60	18.69	17.10	16.60	39.80
26		FTP-3	50.00	31.60	27.80	40.30	14.90	43.90	14.50
27		FTP-4	50.00	17.80	26.90	41.20	16.90	18.80	14.62
28	SMS-2	FTP	50.00	21.60	36.30	43.60	21.90	14.80	19.30
29	Pellet plant	Pellet plant process stack	50.00	41.5	46.7	46.60	44.50	42.80	41.00
30		Pellet plant dedusting stack	50.00	45.40	41.10	31.80	41.40	45.30	41.16
31	Coke Oven-1	Coke_Oven_WHRB_1_and_2	50.00	10.73	40.70	41.30	20.00	43.60	33.97
32		Coke_Oven_WHRB_3_and_4	50.00	19.50	37.60	45.50	46.60	40.00	37.30
33	Coke Oven-2	Coke_Oven_2_Process_Stack	50.00	25.22	25.22	27.30	27.32	26.71	26.56
34		Coke_Oven_2_Dedusting	50.00	8.77	8.77	9.63	19.70	14.00	15.10
35	Blast Furnace-2	BF_2_Cast_House	50.00	24.87	24.87	13.84	21.80	20.00	38.60
37	Blast Furnace-1	BF_1_Cast_House	50.00	19.60	19.60	19.22	41.90	25.80	44.51
38		BF_1_GCP_Stack	50.00	15.46	19.94	19.11	20.97	18.59	19.44
39	Sinter Plant-1	Charging stack	50.00	22.95	22.95	31.47	26.22	45.70	46.30
40		Discharging	50.00	24.53	24.53	26.37	31.66	19.10	41.10
41	Sinter Plant-2	Charging stack	50.00	42.00	42.00	47.40	7.14	41.90	35.20
42		Discharging	50.00	48.00	42.70	37.40	42.50	47.30	38.20
43	LCP	LCP-1	50.00	45	45.5	48.2	48.9	45.8	47.23
44		LCP-2	50.00	41.5	41.7	40.3	44.37	48.6	46.69

45		LCP-3	50.00	46	46.7	41.6	40.8	46.2	36.43
46		LCP-4	50.00	45.8	43.9	41.2	45.6	40.4	46

Annexure-V

Fugitive Emission Results (Oct'23 to Mar'24)

No	Sampling Location	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	Standard in (µg/m3)
1	Blast Furnace-I,Cast House	1789	1645	1456	1560	1656.7	1550	3000
2	Blast Furnace-II Caste House	1856	1489	1345.2	1645	1735.8	1615	
3	Coke oven-I, Secondary Coal Crushing Building	1452	1769	1520	1725	1523.8	1435.2	
4	Coke Oven-I, Coke cutting Building	1780	1625	1623	1760	1654.9	1450.7	
5	Coke Oven-II, Secondary Coal Crushing Building	1725	1678	1478.6	1520	1782	1655.2	
6	Coke Oven-II, Coke cutting Building	1385	1280	1502	1505	1412.1	1490.20	
7	Day Bin areaDRI 1 & 2	1650.2	1762.3	1820.3	1822.6	1984.1	1760.3	2000
8	PSB & Char Discharging area DRI 1 & 2	1444.3	1370.6	1445.8	1490	1540.2	1325.2	
9	Day Bin area of DRI 3 & 4	1450.4	1545	1450.4	1523	1435.7	1525.3	
10	PSB & Char Discharging area DRI 3 & 4	1395.2	1496	1776	1690	1721.5	1885.2	
11	Day Bin area of DRI 5 & 6	1450.8	1440	1526	1456	1674.8	1640.2	
12	PSB & Char Discharging area DRI 5 & 6	1740.8	1680	1783	1845	1745.2	1888.2	
13	Day Bin area of DRI 7 & 8	1446	1580	1500	1665	1687.2	1752.3	
14	PSB & Char Discharging area DRI 7 & 8	1480	1545	1649	1749	1687.8	1725.2	
15	Day Bin area of DRI 9 & 10	1450	1578	1642	1450	1628.4	1546.2	
16	PSB & Char Discharging area DRI 9 & 10	1589	1546	1678	1868	1562.4	1725.2	
17	Daybin area of DRI 11 & 12	1545	1623	1442	1656	1562.1	1456.2	
18	PSB & Char Discharge area of DRI 11 &12	1756	1645	1626	1800	1762	1855.2	
19	Lime Plant Transfer point	1823	1900	1742.3	1852	1708.4	1856.2	2000
20	Lime Plant Kiln Area	1768	1687	1534	1720	1812	1902	
21	Lime Plant Delivery Building	1767	1856	1978	1790	1678	1876	

22	Sinter Plant-1 Flux crushing area	1679	1645	1590.7	1602	1753.7	1835.2	200
23	Sinter Plant-1 Propertional building area	1510.3	1612	1663.2	1775	1709.5	1645.7	
24	SMS-I EAF 1 & 2 area	1825	1778	1790.8	1678	1758.7	1888.6	3000
25	SMS-I EAF 3 & 4 area	1896	1789	1824	1889	1632.4	1832.5	
26	SMS-II,EAF-I Area	1623	1789	1800	1758	1622.4	1760.2	
27	Pellet Plant, Additive grinding area	1842	1900	1656.3	1820	1935.7	1756.2	
28	Pellet plant dosing and mixing area	1756	1745	1889	1652	1762.5	1856.8	

Annexure-VI

Treated Effluent water Analysis Result (ETP)
(Oct-23 to Mar-24)

Sl. No	Parameters	Unit	General Standard	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24
1	pH	-	6.5 to 8.5	6.64	6.98	6.98	7.23	6.86	6.61
2	Total Suspended Solids as TSS	mg/l	100	12	16	14	37.68	6	1.2
3	Total disolve solid	mg/l	2100	1750	1580	1980	1610	1720	1810
4	BOD (3 days at 27°C)	mg/l	30	22	14	11.5	20	8	<3.0
5	COD	mg/l	250	90	60	40	60	30	<5.0
6	Oil & Grease	mg/l	10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
7	Ammonical nitrogen (as N)	mg/l	50	<1.0	<1.0	<1.0	<0.56	0.28	0.28
8	Iron (as Fe)	mg/l	3	0.09	0.08	0.08	0.02	0.01	0.06
9	Total Chromium as Cr	mg/l	2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
10	Cyanide (as CN)	mg/l	0.2	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
11	Phenol	mg/l	<1.0	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001

Treated Waste Water Analysis Result (WWTP-I)
(Oct'23 to Mar'24)

S..N	Parameters	Unit	General Standard	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24
1	pH	-	6.5 to 8.5	6.51	7.13	7.4	7.55	6.57	6.97
2	Total Suspended Solids as TSS	mg/l	100	17	14	18	32.62	5	20
3	Total disolve solid	mg/l	2100	1127	1326	1260	1570	2010	2075
4	BOD (3 days at 27°C)	mg/l	30	<3.0	<3.0	8.5	7.8	15	<3.0
5	COD	mg/l	<250	10	<5.0	<5.0	160	60	26
6	Oil & Grease	mg/l	10	<1.0	<1.0	<1.0	1.4	<1.0	<1.0
7	Iron (as Fe)	mg/l	3	0.09	0.06	0.05	0.35	0.31	0.5

Treated Waste Water Analysis Result (WWTP-II)
(Oct'23 to Mar'24)

S..N	Parameters	Unit	General Standard	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24
1	pH	-	6.5 to 8.5	6.75	6.75	6.9	7.92	6.67	6.65
2	Total Suspended Solids as TSS	mg/l	100	12	12	16	19.58	<1.0	12
3	Total disolve solid	mg/l	2100	1251	1251	1275	1495	1120	1874
4	BOD (3 days at 27°C)	mg/l	30	<3.0	<3.0	7.5	25	5.5	<3.0
5	COD	mg/l	250	10	10	12	70	20	14
6	Oil & Grease	mg/l	10	<1.0	<1.0	<1.0	<1.0	<1.0	0.02
7	Iron (as Fe)	mg/l	3	0.07	0.07	0.06	0.01	<0.01	<0.2

Treated Waste Water Analysis Result (WWTP-III)
(Oct'23 to Mar'23)

S.N	Parameters	Unit	General Standard	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24
1	pH	-	6.5 to 8.5	6.65	7.27	8.51	7.91	6.87	6.64
2	Total Suspended Solids as TSS	mg/l	100	25	19	25	18.8	<1.0	16
4	BOD (3 days at 27°C)	mg/l	30	<3.0	<3.0	6	15	<3.0	<3.0
3	Total disolve solids	mg/l	2100	1145	980	1970	920	1030	1954
5	COD	mg/l	250	20	10	30	50	10	18
6	Oil & Grease	mg/l	10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
7	Iron (as Fe)	mg/l	3	0.09	0.07	1.0	0.02	0.03	0.3

Treated Effluent Water Analysis Result (BETP-)
(Oct'23 to Mar'24)

Sl. No	Parameters	Unit	General Standard	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24
1	pH	-	6.5 to 8.5	6.76	7.41	7.4	7.58	7.01	7.25
2	Total Suspended Solids as TSS	mg/l	100	45	36	54	34.79	11	20
3	Total disolve solids	mg/l	2100	2010	1260	1870	1380	2010	2010
4	BOD (3 days at 27°C)	mg/l	30	27	19	28	25	29	20
5	COD	mg/l	250	120	80	100	210	200	70
6	Oil & Grease	mg/l	10	2.54	1.84	6.0	4.2	4.8	2.4
7	Ammonical nitrogen (as N)	mg/l	50	10.14	8.6	10.6	1.96	1.4	1.28
8	Iron (as Fe)	mg/l	3	1.05	0.75	2.68	1.9	1.74	1.74
9	Total Chromium as Cr	mg/l	2	0.04	0.06	0.05	0.01	<0.01	<0.01
10	Cyanide (as CN)	mg/l	0.2	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
11	Phenol	mg/l	<1.0	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001

Annexure-VII

Ground water Quality

No	Parameter	Unit	Standard as per IS 10500:2012	GW -1	GW-2	GW -3	GW- 4	GW-5
1	Colour	Hazen	5	<1.0	< 1.0	< 1.0	< 1.0	<1.0
2	Odour	--	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
3	Taste	--	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
4	Turbidity	NTU	1	<0.1	<0.1	<0.1	<1.0	<0.1
5	pH Value	--	6.5 -8.5	6.66	6.91	7.13	6.75	6.83
6	Dissolved Solids	mg/l	500	390	338	430	318	312
7	Residual, free Chlorine	mg/l	0.2	<0.1	<0.1	<0.1	<0.1	<0.1
8	Total Hardness (as $CaCO_3$)	mg/l	200	175	175	170	190	185
9	Calcium (as Ca)	mg/l	75	40	44	44.4	40.1	60.1
10	Magnesium (as Mg)	mg/l	30	18	15.8	14.3	21.8	8.5
11	Alkalinity	mg/l	200	170	145	125	100	75
12	Chloride (as Cl)	mg/l	250	127.5	65	102.5	90	70
13	Fluoride (as F)	mg/l	1	0.74	0.67	0.62	0.55	0.66
14	Sulphate (as SO_4)	mg/l	200	58.6	6.7	184	10.4	62.1
15	Nitrate (as NO_3)	mg/l	45	5.24	1.73	9.82	5.68	12.84
16	Chromium (as Cr^{+6})	mg/l	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
17	Phenolic Compounds (as C_6H_5OH)	mg/l	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
18	Iron (as Fe)	mg/l	1	0.13	0.11	0.15	0.05	0.1
19	Cyanide (as CN)	mg/l	0.05	<0.02	<0.02	<0.02	<0.02	<0.02
20	Copper (as Cu)	mg/l	0.05	<0.01	<0.01	<0.01	<0.01	<0.01
21	Manganese (as Mn)	mg/l	0.1	0.05	0.02	0.05	0.03	0.04
22	Mercury (as Hg)	mg/l	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
23	Cadmium (as Cd)	mg/l	0.003	<0.001	<0.001	<0.001	<0.001	<0.001
24	Selenium (as Se)	mg/l	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
25	Arsenic (as As)	mg/l	0.01	<0.001	<0.001	<0.001	<0.001	<0.001
26	Lead (as Pb)	mg/l	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
27	Zinc (as Zn)	mg/l	5	0.08	<0.02	0.16	0.07	0.1
28	Aluminium as(Al)	mg/l	0.03	<0.01	<0.01	<0.01	<0.01	<0.01
29	Boron (as B)	mg/l	0.5	0.08	0.06	0.09	0.09	0.09

N.B-GW1-Thekoloi Tube well,GW2-Sripura Tube well,GW-3-Lapanga Village,GW4-Dhuben Chapper village,GW-5-Gumkarma village tube well

Annexure-VIII

Details of Solid Waste

No	Units	Solid waste	Utilization
01	Blast Furnace	BF Slag	The entire slag generating from BF is granulated and sold to cement manufacturers.
02	Steel Melting Shop	SMS Slag	Slag is being crushed and the metallic content is recovered and recycled through Sinter Plant. The residue after recovery is used for internal road making and in leveling of low lined areas in the plant.
03	Steel Melting Shop	FTP dust from EAF/LF	Recycle through pellet/sinter plant
04	DRI	Char	Char generate from DRI unit is blended with coal and used in AFBC and CFBC boilers of Captive Power plant
06	Sinter plant	ESP dust	Recycled in sinter/pellet plant
07	CSP & Rolling Mill	Scales & derbies from CSP and Rolling mill	Scales and debris generating from rolling mill and SMS is recycled in Sinter Plant
08	Different Units	Scrap	Recycled in Steel melting shop
09	Captive Power Plant	Ash	The ash generated from CPP is being utilized in different area like fly ash brick manufacturing, low lying area filling, embankment rising and exhausted quarry void filling.

Annexure-IX

CSR EXPENDITURE FY 2023-24(April2023 to March24)				
S.No	**Programme Head**	**Name of the Key Interventions**	**Budget (₹)**	**Actual (₹)**
1	Community Development	School Infrastructure Repairing of Roads Stadium Development Construction of Community Centers Renovation of Ponds	9,96,54,569	5,72,70,535
2	Health & Nutrition	Trauma Centre Development Community Dispensary Mobile Medical Unit Community Ambulance	2,07,04,031	1,56,88,002
3	Water & Sanitation	Provision of Drinking Water at DIZ Pond Excavation Provision of Waste Collection at DIZ	3,06,48,249	3,00,77,735
4	Education	Udaan Scholarship Renovation of Schools and AWCs	3,65,72,824	3,58,95,225
5	Sports Promotion	Promotion of different sports Bisadihi Football Ground Development	17,81,406	1702191.9
6	Livelhoods	JSW Shakti - Women Enterprise Development Programme Sewing Training cum Production Center	1,06,74,710	1,02,99,230
	Total		**20,00,35,798**	**1,56,97,779**

ROAD INFRASTRUCTURE

Ongoing Construction of Road at Derba

Const. of Village Road, Lapanga

Const. of Village Road, Thelkoloi

WATER BODY DEVELOPMENT

Bansimal Pond, Lapanga

Chuhuri Pond, Dhubenchhapal

Khadiapali Pond, Lapanga

Bramhanpada Pond, Thelkoloi

Talipada Pond, Derba

HEALTH CARE FACILITIES

Objective
Providing comprehensive primary healthcare service to the community in their respective habitation with an aim to ensure universal health coverage.

Initiatives	Outcomes (YTD)
No. of habitation covered under MMU per week	27
No. of patients diagnosed through MMU	13899
No. of patients diagnosed in Multispecialty Health Camps	2724

Health Camp at Sripura Village

Health Check up in MMU

Home Visit for Bed Ridden Patient

Doctor's Consultation

E.C.G Test

Modular O.T.

Medical Equipment.

DRINKING WATER AND SANITATION

Road Cleaning, Sripura

Drinking Water Supply, Sripura

Drinking Water Supply, Maliatikra

Initiatives Under WaSH Programme

VOCATIONAL TRAINING

Sewing Training ongoing

Industrial exposure visit to Aditya Birla Fashion Retail Ltd

Sewing Training ongoing

Mushroom Cultivation at Kherual

Floriculture at Banjiberna

Mixture Unit at Ghichamura

Cotton Wick, Banjiberna

Weavers Training Center, Banjiberna

Weekly Haat

EDUCATION

Govt. Primary School, Dhubenchhapal

Govt. High School, Thelkoloi

Saraswati Shishu Vidya Mandir, Lapanga

Govt. High School, Sripura

Construction & Renovation of School Infrastructure

Ongoing Construction of Thelkoloi High School, Thelkoloi

Dhubenchhapal Primary School

Sripura Primary School

Sripura Upper Primary School

Dhubenchhapal Primary School

Renovation of Anganwadi Centres

Anganwadi Center, Jhakarpada

Anganwadi Center, Derba

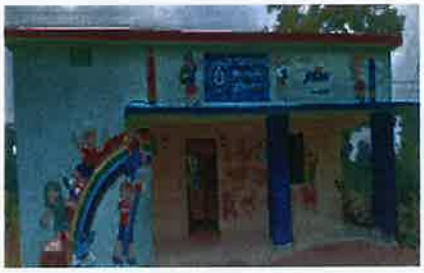
Anganwadi Center, Budula

Anganwadi Center, Bisadihii

Anganwadi Center, Gumkarma (B)

Anganwadi Center, Gumkarma (A)

Anganwadi Center, Ghichamura



Anganwadi Center, Gaurdihi

Anganwadi Center, Beunra

Electrification/ Solar Street Lighting

Annexure-X(A)

Workzone Noise Monitoring Result (Oct-23 to Mar-24)

Sl.No.	Name of the Unit	Location	Average Noise Level in dB(A)						Standard as per factory Act 1950
			Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	
1	DRI -A	Kiln main drive	80.50	81.55	80.50	82.7	84.70	80.40	
		Lobe comp. House (Inside)	81.20	82.95	82.00	82.00	80.55	83.40	
		Lobe comp. House (Outside)	79.55	77.60	80.55	81.5	76.60	78.45	
2	DRI-B	Kiln main drive	82.6	80.64	83.60	82.4	84.45	83.00	
		Lobe comp. House (Inside)	83.7	84.60	80.55	82.4	84.60	81.40	
		Lobe comp. House (Outside)	82.65	82.60	79.50	82.7	80.35	83.40	
3	DRI-C	Kiln main drive	83.60	81.25	80.80	82.50	84.55	82.40	
		Lobe comp. House (Inside)	81.40	80.60	78.05	82.85	81.25	82.40	
		Lobe comp. House (Outside)	80.45	78.40	82.10	80.80	78.35	80.45	
4	DRI-D	Kiln main drive	83.30	81.85	80.95	81.50	82.40	83.40	
		Lobe comp. House (Inside)	82.20	84.5	83.75	83.30	81.60	84.65	
		Lobe comp. House (Outside)	80.45	81.5	82.70	80.80	78.60	80.15	
5	DRI-E	Kiln main drive	79.45	83.5	84.55	83.40	82.35	82.45	
		Lobe comp. House (Inside)	79.10	83.5	81.80	82.75	81.50	81.20	
		Lobe comp. House (Outside)	77.25	78.9	84.35	81.80	80.23	80.25	
6	DRI-F	Kiln main drive	82.25	84.7	81.05	82.50	84.78	83.60	
		Lobe comp. House (Inside)	83.50	78.9	78.60	81.90	79.45	80.21	
		Lobe comp. House (Outside)	84.50	84.6	82.80	79.80	84.70	82.90	
7	DRI-G	Kiln main drive	83.45	83.7	83.80	84.25	83.75	83.40	
		Lobe comp. House (Inside)	82.65	82.3	81.85	83.55	83.75	82.35	
		Lobe comp. House (Outside)	80.60	81.4	80.95	80.80	81.25	78.30	
8	DRI-H	Kiln main drive	83.6	84.2	81.56	80.55	82.25	83.45	
		Lobe comp. House (Inside)	83.5	84.2	81.90	81.10	81.35	80.71	
		Lobe comp. House (Outside)	81.5	82.7	79.40	80.55	79.35	78.45	
9	DRI-I	Kiln main drive	83.50	84.7	82.85	84.30	80.50	84.40	
		Lobe comp. House (Inside)	83.50	83.5	82.40	83.35	83.50	81.40	
		Lobe comp. House (Outside)	80.40	81.8	80.85	81.50	80.60	82.50	
10	DRI-J	Kiln main drive	82.75	85.8	89.65	87.40	85.30	81.30	
		Lobe comp. House (Inside)	82.50	80.7	81.65	82.30	84.30	83.50	
		Lobe comp. House (Outside)	80.55	79.6	80.75	78.65	80.30	80.35	

11	DRI-K	Kiln main drive	82.40	84.50	83.65	83.55	83.35	80.35
		Lobe comp. House (Inside)	81.50	83.95	82.75	83.60	81.30	83.40
		Lobe comp. House (Outside)	78.45	80.95	80.75	81.45	79.35	80.35
12	DRI-L	Kiln main drive	83.55	80.3	84.65	83.50	82.30	84.55
		Lobe comp. House (Inside)	80.30	78.0	83.90	84.20	81.50	83.35
		Lobe comp. House (Outside)	79.40	80.8	79.70	80.50	78.90	81.15
13	CPP 3x130 MW	Turbine-1	80.45	82.45	85.45	82.85	83.45	81.30
		Turbine-2	82.45	82.5	81.45	83.45	80.70	82.15
		Turbine-3	83.20	83.5	83.2	78.65	83.5	79.05
		Boiler-1	82.65	84.7	82.65	82.35	83.85	85.55
		Boiler-2	81.75	82.8	83.75	80.15	82.5	81.35
		Boiler-3	83.75	81.75	81.85	82.3	81.7	82.40
		Boiler-4	82.70	81.4	82.7	82.4	80.45	82.35
		Boiler-5	82.50	82.6	82.5	84.3	83.65	81.20
		Boiler-6	88.50	83.75	88.50	82.45	82.55	82.25
		Feed Pump Area	82.35	84.35	80.35	83.50	82.25	81.60
14	CPP 100 MW	Turbine Area (40 MW)	82.75	80.5	82.9	92.60	83.35	90.45
		Turbine Area (60 MW)	81.75	82.65	81.75	84.3	82.15	82.35
		Feed Pump Area	90.50	83.7	82.80	89.65	84.30	92.35
		Boiler Area	82.95	84.3	80.65	82.45	84.5	81.95
15	Blast Furnace-I	Cast House	82.45	83.7	82.45	83.55	82.55	82.05
		Blower House Turbo (Blower-2)	82.75	81.45	83.75	81.5	80.3	82.30
		Blower House Motorized (Blower-3)	82.6	83.5	81.55	83.40	82.60	83.35
		Gas Cleaning Plant	84.7	84.5	82.7	80.50	82.25	81.35
		Stock House	81.1	83.1	80.23	82.55	81.4	82.30
16	Blast Furnace-II	Cast House	83.50	82.75	81.05	84.5	83.35	82.15
		Blower House Turbo (Blower-2)	83.50	82.5	84.10	82.20	81.55	82.90
		Blower House Motorized (Blower-3)	80.85	82.2	80	81.45	82.75	81.30
		Gas Cleaning Plant	84.65	83.55	80.20	81.4	84.45	82.40
		Stock House	78.75	80.2	80.65	83.35	81.7	82.30
17	Sinter Plant	Blower House	81.50	82.8	83.05	84.45	83.75	78.95
		Flux Charging area	82.50	81.6	82.65	79.55	83.35	82.01
		Proportional Building	81.8	80	82.8	81.45	82.4	82.30
18	Coke Oven-1	Battery Area	82.65	81.3	83.5	84.4	83.75	81.60
		Coke Cutting & Screening Building	82.1	80.2	84.1	83.65	84.4	83.60

19	Coke Oven-2	Battery Area	83.7	83.6	83.7	82.70	81.75	84.00
		By-Product (Exhauster Area)	82.55	82.8	80.6	83.8	80.55	81.90
20	RMPP - I	Truck Tippling	82.55	80.8	83.5	82.4	82.9	81.70
		Stacking	83.35	84.70	83.7	83.6	82.8	82.40
		Coal Crushing Screening	82.9	84.00	83.2	84.70	84.50	81.55
		Ore Crushing & Screening	84.6	82.70	82.5	84.5	82.25	83.50
21	RMPP - II	Stacking & Reclaming -3	83.6	81.50	82.6	82.9	80.5	78.90
		Stacking & Reclaming -4	81.4	82.00	81	83	82.75	79.50
		Stacking & Reclaming -5	82.5	82.00	83.5	81.80	81.40	80.00
22	RMPP-III	Infron of Office	78.8	77.78	80.8	76.8	76.9	80.60
		Coal reclaiming area	78.9	80.20	79.6	78	81	80.80
		Belt press crushing area	78	82.00	78.8	80	81.45	82.30
23	Coal Washery -I	Infront of office	78.8	80.00	79.8	80.60	78.70	81.35
		Near Silo	86	81.90	78.7	82.7	80.00	78.80
24	Coal Washery -II	Infront of office	80.5	82.40	82.1	78.05	80.60	81.15
		Near Silo	78.8	81.80	80.3	78.15	82.50	77.80
25	Lime Plant	Blower House	82.3	82.70	79.2	80.30	81.70	82.40
		Kiln Area	81.4	82.70	82	80.05	78.6	81.35
		Lime Sizing Area	82.7	80.70	80.36	81.25	79.3	82.45
26	Pellete Plant	Mill Area (Addittive Mixing)	82.5	83.60	82.4	84.7	80.5	81.70
		Balling Disc Area	82.7	81.70	80.7	80.90	82.40	80.50
		Indurating machine Area	83.3	84.50	84.7	82.35	81.7	82.45
		Screening Area	80.5	80.80	83.6	81.35	82.8	82.00
		Updraught drying fan Area	81.65	82.80	82.6	82.45	80.5	82.40
		Wind Box Recuperation fan Area	82.35	84.55	81.2	84.45	82.00	81.65
		Cooling Air fan Area	82.4	80.30	82.5	83.35	80.0	82.25
		Dedusting ID fan Area	83.45	82.2	78.8	80	82.5	83.45
27	Oxygen Plant	Air Filtration Area	82.80	81.6	78.9	83	84	83.30
		Air Compressor Area	83.75	85.6	84.78	82.95	84.40	82.90
		Cooling Water System Area	82.30	84.86	82.95	82.78	81.9	82.40
		Air Purification Area	78.80	84.8	78.9	81.85	83.4	81.35
		Air Separation Area	80.30	81.7	82.8	82.6	79.7	81.80
		Distribution Area	83.70	82.7	80	83.75	81.00	82.80
		EAF - 1 Area	81.2	82.95	84.2	82.3	82.7	84.80
		EAF-2 Area	81.7	82.8	83	83.7	82.9	85.65

28	SMS - I	EAF-3 Area	81.9	82.8	82.7	82.75	80.8	82.40
		EAF-4 Area	82.3	82.8	84.7	83.50	81.90	82.40
		LF 1&2 Area	80.50	81.20	83.5	80.40	82.60	83.45
		LF 3&4 Area	82.80	84.80	82.75	85.40	82.70	81.75
		Near Office	78.80	75.80	78.9	80.55	79.90	78.50
29	SMS - II	EAF Area	83.60	82.80	84.8	82.10	85.55	82.40
		LRF Area	84.80	82.80	83.3	82.50	81.80	83.45
		VD Area	83.30	80.50	82.4	82.50	82.10	80.30
		Caster Area	82.70	82.80	84	81.70	82.60	80.50
		Near Office	78.50	77.80	80	81.70	77.40	77.80
		Near Laboratory	79.80	78.90	77.8	76.90	78.90	82.70
30	Air Compressor Station	CPP 100 MW(Inside)	83.50	82.30	80.05	81.30	79.50	82.40
		CPP 3x130 MW UNIT 1 & 2 (inside)	82.45	83.50	81.85	81.00	82.70	81.45
		CPP 3x130 MW UNIT -3 (inside)	83.75	82.60	83.5	82.00	83.35	80.00
		CSP (Inside)	85.70	82.80	84.1	83.20	82.35	81.30
		Blast Furnace (in side)	82.90	80.60	82.8	82.65	83.50	84.20
		Pillet Plant (in side)	82.8	83.60	83.7	84.3	82.0	82.46
31	CSP	Down Coiler	80.3	83.80	80.6	82.7	82.4	83.55
		Mill Strand	80.7	84.65	78.3	84.00	83.4	80.50
32	CRM	Compressor House (IS)	82.75	82.55	82.4	83.80	84.60	82.80
		Mill area	84.8	81.55	82.6	83.50	80.10	80.50
		Near Corrugation Machine	83.2	83.50	83	80.40	82.40	82.90
		Near Chromating unit	82.5	82.55	82.8	80.00	83.30	81.60
33	WRM	Near Combination Air fan	80.7	82.9	82.8	83.5	81.4	84.30
		Compressor House (is)	82.75	79.55	81.45	81.6	82.45	82.80

Annexure-X (B)

Ambient Noise Monitoring Result (Oct'23 to Mar'24)

Month/Standard	Monitoring Location							
	North East Side Boundary Near Township		North West Side Boundary Near Main Gate		South West Side Boundary Near ETP		South East Side Boundary Near Railway Gate	
	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time
	75 dB (A) Leq	70 dB (A) Leq	75 dB (A) Leq	70 dB (A) Leq	75 dB (A) Leq	70 dB (A) Leq	75 dB (A) Leq	70 dB (A) Leq
Oct'23	68.4	60.5	67.8	61.0	68.0	60.5	67.0	56.0
Nov'23	63.8	58.4	65.2	57.5	67.4	55.5	68.6	61.6
Dec'23	65.2	54.8	69.1	55.4	65.8	55.9	67.8	56.7
Jan'24	67.6	55.9	63.0	54.0	68.1	57.5	69.3	55.3
Feb'24	67.8	54.0	65.8	55.2	66.0	53.2	65.0	54.0
Mar'24	66.7	56.3	67.8	54.2	63.6	55.4	67.6	56.4