



स्टील अथॉरिटी ऑफ इण्डिया लिमिटेड
STEEL AUTHORITY OF INDIA LIMITED
भिलाई इस्पात संयंत्र
BHILAI STEEL PLANT

GM I/c(EnMD)/B-8/2023/324

Date: 24/11/2023

To,

Integrated Regional Office,
Aranya Bhawan, North Block, Sector-19,
Naya Raipur,
Atal Nagar, Chhattisgarh
E-mail: iroraipur@gmail.com

Sub: Environmental Clearance of 7.0 MTPA Expansion at BSP – Submission of 6 monthly compliances Reports.

Ref: Environmental Clearance granted by MoEFCC's vide F.no. J-11011/28/2007- IA II (I) dated 24.05.2019.

Respected Sir,

Six monthly compliance report (April-2023 to September-2023) for the BSP's 7.0 MT Expansion / Modernization project vide letter under reference is enclosed.

The project details & pointwise information on the status of compliance of EC conditions along with relevant monitoring reports & other details etc. are also enclosed.

Thanking you,

(Dibyendu Lal Moitra)
CGM (Env.MD)

Copy to:

In-Charge
Ministry of Environment & Forests and Climate Change,
Regional Office (West-Central Zone)
Ground Floor, East Wing
New Secretariat, Civil Line
Nagpur – 440001

Half Yearly Compliance Report**2023****01 Dec(01 Apr - 30 Sep)****Acknowledgment**

Proposal Name	Revised configuration of modernization-cum-expansion of 7.0 MTPA Bhilai Steel Plant by Mis Steel Authority of India Limited (SAIL) located at Bhilai, District Durg, Chhattisgarh- Amendment in Environment Clearance - regarding.		
Name of Entity / Corporate Office	Ms.Uma Katoch		
Village(s)	N/A		
District	DURG		
Proposal No.	IA/CG/IND/260774/2022 dtd 11/03/2022.	Category	Industrial Projects - 1
Plot / Survey / Khasra No.	N/A	Sub-District	N/A
State	CHHATTISGARH	Entity's PAN	NA
MoEF File No.	F. No. IA-J-1101112812007-IA 11 (I)	Entity name as per PAN	NA

Compliance Reporting Details

Reporting Year 2023
Remarks (if any)
Reporting Period 01 Dec(01 Apr - 30 Sep)

Details of Production and Project Area

Name of Entity / Corporate Office Ms.Uma Katoch

	Project Area as per EC Granted	Annual Project Area in Possession
Private	0	0
Revenue Land	0	0
Forest	0	0
Others	0	0
Total	0	0

Production Capacity

Sr. no	Product Name	units	Valid Upto	Capacity	Production last year	Capacity as per CTO
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Conditions

Specific Conditions

Sr.No.	Condition Type	Condition Details
1	MISCELLANEOUS	Safety mock drill for gas pipeline maintenance shall be conducted every six months and reported to the Regional Office of MoEF&CC. The project proponent shall arrange to provide training to employees on 'behavioral safety'.
PPs Submission: Complied • Safety mock drill for gas pipeline maintenance are being conducted every six months (Report enclosed at Flag-A) • Training to employees on 'behavioural safety' is being organized regularly (Report enclosed at Flag-B)		Date: 03/01/2024
2	Corporate Environmental Responsibility	All CER activities as committed in the reply to the ADS letter dated 02.01.2019 shall be completed in the financial year 2019-20.
PPs Submission: Complied • BSP has initiated action for the completion of all identified CER activities/projects committed in the reply to the ADS letter dated 02.01.2019. • Due to the prevalence of the COVID pandemic (1st wave from March to November 2020 and 2nd wave from March to June-2021) there has been delay in the completion of the projects. • However, presently the CER projects are progressing well & likely to be completed by March 2022. • A detailed status report on CER activities is enclosed at Flag-C		Date: 03/01/2024
3	AIR QUALITY MONITORING AND PRESERVATION	Standard Operating Procedures (SOPs) shall be developed for performance monitoring of pollution control devices and performance monitoring should get conducted every year internally and every third year through accredited third party,
PPs Submission: Complied Standard Operating Procedures (SOPs) are developed for performance monitoring of pollution control devices and performance monitoring every year internally Performance monitoring of pollution control devices at every three year through an accredited third party will also be conducted.		Date: 03/01/2024
4	GREENBELT	Scheme for decommissioning of SMS-1 and its utilities along with green belt development in that area shall be submitted within six months to the Ministry and Regional Office of the MoEF&CC.
PPs Submission: Complied SMS-1 phased-out in March-2021 Decommissioning plan along with greenbelt development will be submitted to MoEF&CC.		Date: 03/01/2024
5	GREENBELT	Scheme for green belt development in the remaining area for covering 33% of total project area shall be submitted to the Regional office of the MoEF&CC.
PPs Submission: Complied • BSP has planted 4540942 nos of trees in an area covering about 1885 hectares till Sep.-2023. • In the year 2023-24 BSP has been planted 25942Trees. 25650 saplings planted at Township and its surrounding area of Bhilai. Work awarded to C.G. Van Vikas Nigam. • In the year 2022-23(April-March), BSP has planted 21210 trees within the plant premises & township covering an area of about 20-25 hectares. • Further Green belt required to be developed to meet the 33% criteria is about 280 Hectares . • However by excluding the two reservoirs/cooling ponds area of 1100 hectares from the total area of the project, BSP's green belt coverage comes to 36.34 %.		Date: 03/01/2024
6	MISCELLANEOUS	In the Environmental Policy the hierarchy of reporting environmental non-compliances and emergencies should be clearly mentioned and submitted to the Regional Office of the MoEF&CC.

PPs Submission: Complied The policy followed at SAIL for reporting environmental non-compliances and emergencies has already been submitted to MoEF&CC-New Delhi.		Date: 03/01/2024
7	WASTE MANAGEMENT	Solid waste management as committed in the reply to the ADS letter dated 02.01.2019 shall be complied.
PPs Submission: Complied Solid waste management as committed in the reply to the ADS letter dated 02.01.2019 will be complied.		Date: 03/01/2024
8	WASTE MANAGEMENT	100 % SMS -Slag utilization shall be ensured after conditioning /steam curing.
PPs Submission: Complied • About 55% the BOF slag is presently being recycled back in to steel making process and also utilized in Road Making & filling of the low lying areas. • BSP has also started selling BOF slag to the interested buyers (Cement Plants other Construction industries) since April-2021. • A pilot scale study on “Development of process for steam maturing of BOF slag” at BSL was taken up by SAIL. The matured BOF slag can be utilised as an aggregate in cement concrete, as rail track ballast and for road making etc. SAIL came out with the final report, wherein optimum process parameters have been frozen. The proposition for steam maturing facility on commercial scale is under consideration. • Number of other R&D efforts are being taken-up by SAIL in association with other agencies, which are still in nascent stage. After the completion of these studies, exploring the options for commercial scale/bulk utilization of BOF slag will be taken-up. • BSP has given an assignment to NIT-Raipur for “Assessing the suitability of Twin Hearth Furnace(THF)/Steel Slag as pavement material and feasibility of THF/Steel slag in construction of the rural roads. NIT Raipur has submitted the final report in June-2021.The report was submitted to CECB and will be shared with all agencies involved in road making to promote the use of steel slag in Road making and other infrastructure projects.		Date: 03/01/2024
General Conditions		
Sr.No.	Condition Type	Condition Details
1	ENERGY PRESERVATION MEASURES	Use hot charging of slabs and billets/blooms as far as possible
PPs Submission: Complied Hot charging of slabs and billets/blooms is being done at Rolling mills.		Date: 04/01/2024
2	WASTE MANAGEMENT	Used refractories shall be recycled as far as possible
PPs Submission: Complied Being done.		Date: 04/01/2024
3	ENERGY PRESERVATION MEASURES	Waste heat shall be recovered from Sinter Plants coolers and Sinter Machines
PPs Submission: Complied Waste heat recovery systems have been installed for Sinter Plants coolers and Sinter Machines of SP-3.		Date: 04/01/2024
4	AIR QUALITY MONITORING AND PRESERVATION	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)

PPs Submission: Complied Facilities for spillage collection are provided for coal and coke on wharf of coke oven batteries		Date: 03/01/2024
5	AIR QUALITY MONITORING AND PRESERVATION	Land-based APC system shall be installed to control coke pushing emissions
PPs Submission: Complied Land-based APC system has been installed to control coke pushing emissions in Coke oven Battery-11.		Date: 03/01/2024
6	AIR QUALITY MONITORING AND PRESERVATION	Monitor CO, HC and Oz in flue gases of the coke oven battery to detect combustion efficiency and cross leakages in the combustion chamber
PPs Submission: Complied Monitor CO, and O2 in flue gases of the coke oven battery to detect combustion efficiency and cross leakages in the combustion chamber are being measured.		Date: 03/01/2024
7	WATER QUALITY MONITORING AND PRESERVATION	Adhere to 'Zero Liquid Discharge'
PPs Submission: Complied BSP has three outlets carrying plant effluent (Outlet-A , B &C). Effluent from outlet-A (About 5000 m3/Hr) is already being recycled and the recycling schemes for Outlet-B (450 m3/hr) & Outlet-C (2500 m3/hr) are in advanced stage of completion.		Date: 03/01/2024
8	ENERGY PRESERVATION MEASURES	Provide LED lights in their offices and residential areas
PPs Submission: Complied Extensive use of LED lights in their offices and residential areas is being practiced.		Date: 04/01/2024
9	ENERGY PRESERVATION MEASURES	Coke Dry Quenching (CDQ) shall be provided for coke quenching for both recovery and non-recovery type coke ovens
PPs Submission: Complied At new Coke oven Battaery-11, Coke Dry Quenching (CDQ) has been installed		Date: 04/01/2024
10	MISCELLANEOUS	Any appeal against this EC shall lie with the National Green Tribunal, if preferred within a period of 30 days as prescribed under Sction16 of the National Green Tribunal Act,2010
PPs Submission: Complied Agreed		Date: 04/01/2024
11	AIR QUALITY MONITORING AND PRESERVATION	The project proponent use leak proof trucks/dumpers carrying coal and other raw materials and cover them with tarpaulin.
PPs Submission: Complied At BSP railway wagons are being used for transportation of 95 % of the raw materials like coal & Iron ore. For internal transportation of raw materials leak proof trucks/dumpers are being used after proper covering.		Date: 03/01/2024
12	ENERGY PRESERVATION	Waste heat recovery systems shall be provided in all units where

	MEASURES	the flue gas or process gas exceeds 300oC
PPs Submission: Complied Waste heat recovery systems have been installed at Sinter Plants, Coke ovens, Blast Furnaces, Power Plants		Date: 04/01/2024
13	ENERGY PRESERVATION MEASURES	Ensure installation of regenerative type burners on all reheating furnaces
PPs Submission: Complied regenerative type burners are being used for all reheating furnaces.		Date: 04/01/2024
14	AIR QUALITY MONITORING AND PRESERVATION	The project proponent shall install system to carryout Continuous Ambient Air Quality monitoring for common/ criterion parameters relevant to the main pollutants released (e.g- PM10 and PM2.5 in reference to PM emission, and SOx and NOx in reference to SO2 and NOx emissions) within and outside the plant area at least at four locations (one within and three outside the plant area at an angle of 120° each), covering upwind and downwind directions
PPs Submission: Complied 4 nos of Continuous Ambient Air Quality monitoring stations have been installed within and outside the plant area covering upwind and downwind directions Twelve air pollutants, as per the National Ambient Air quality standards-2009, namely, PM10, PM2.5, Carbon Monoxide (CO), Sulphur Dioxide (SO2), Nitrogen Dioxide (NO2), Ammonia (NH3), ground level Ozone (O3), Lead, Arsenic, Nickel, Benzene and Benzo (a) Pyrene are being measured (Note : Benzene and Benzo (a) Pyrene is measured offline)		Date: 03/01/2024
15	AIR QUALITY MONITORING AND PRESERVATION	The cameras shall be installed at suitable locations for 24X7 recording of battery emissions on the both sides of coke oven batteries and videos shall be preserved for at least one-month recordings.
PPs Submission: Complied Cameras have been installed at Coke ovens for recording of battery emissions		Date: 03/01/2024
16	AIR QUALITY MONITORING AND PRESERVATION	Sampling facility at process stacks and at quenching towers shall be provided as per CPCB guidelines for manual monitoring of emissions
PPs Submission: Complied Sampling facilities at process stacks and at quenching towers have been provided as per CPCB guidelines for manual monitoring of emissions		Date: 03/01/2024
17	AIR QUALITY MONITORING AND PRESERVATION	The project proponent shall submit monthly summary report of continuous stack emission and air quality monitoring and results of manual stack monitoring and manual monitoring of air quality /fugitive emissions to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report,
PPs Submission: Complied Copies of monthly summary report of continuous stack emission and air quality monitoring and results of manual stack monitoring and manual monitoring of air quality /fugitive emissions (October-2021 to March-2022) is enclosed at Flag-E		Date: 03/01/2024
PPs Submission: Complied Copies of monthly summary report of continuous stack emission and air quality monitoring and		Date:

results of manual stack monitoring and manual monitoring of air quality /fugitive emissions (October-2021 to March-2022) is enclosed at Flag-E		03/01/2024
18	AIR QUALITY MONITORING AND PRESERVATION	Secondary emission control system shall be provided at SMS Converters.
PPs Submission: Complied Secondary emission control system has been provided for SMS-3 Converters.		Date: 03/01/2024
19	AIR QUALITY MONITORING AND PRESERVATION	Pollution control system in the steel plant shall be provided as per the CREP Guidelines of CPCB.
PPs Submission: Complied The Pollution control system as per the guidelines of CREP have been provided BOD plant for the treatment of effluents of COCCD Secondary emission control system has been provided for SMS-3 Converters Cast house Defuming systems have been provided for BF-8 & BF-7		Date: 03/01/2024
20	AIR QUALITY MONITORING AND PRESERVATION	Vapour absorption system shall be provided in place of vapour compression system for cooling of coke oven gas in case of recovery type coke ovens
PPs Submission: Complied The installation of the system shall be explored in future based on feasibility		Date: 03/01/2024
21	AIR QUALITY MONITORING AND PRESERVATION	In case concentrated ammonia liquor is incinerated, adopt high temperature incineration to destroy Dioxins and Furans. Suitable NOx control facility shall be provided to meet the prescribed standards
PPs Submission: Complied Regular monitoring of coke oven stack emissions is being done & The Gaseous emissions from Coke ovens are meeting the standards.		Date: 03/01/2024
22	AIR QUALITY MONITORING AND PRESERVATION	The coke oven gas shall be subjected to desulphurization if the sulphur content in the coal exceeds 1%.
PPs Submission: Complied At BSP the imported coal has sulphur content less than 1%.		Date: 03/01/2024
23	AIR QUALITY MONITORING AND PRESERVATION	Wind shelter piles. fence and chemical spraying shall be provided on the raw material stock piles
PPs Submission: Complied Water sprinklers are installed for control of dust at raw material stock piles		Date: 03/01/2024
24	AIR QUALITY MONITORING AND PRESERVATION	Design the ventilation system for adequate air changes as per ACGIH document for all tunnels, motor houses, Oil Cellars
PPs Submission: Complied Ventilation system for adequate air changes as per ACGIH document for all tunnels, motor houses, Oil Cellars are installed.		Date: 03/01/2024

25	Statutory compliance	The project proponent shall obtain the necessary permission from the Central Ground Water Authority, in case of drawl of ground water / from the competent authority concerned in case of drawl of surface water required for the project.
PPs Submission: Complied No ground water will be used for the project.		Date: 03/01/2024
26	Statutory compliance	The project proponent shall obtain authorization under the Hazardous and other Waste Management Rules,2016 as amended from time to time.
PPs Submission: Complied BSP has obtained the Authorization for the handling of the Hazardous Waste Generated in the Plant from Chhattisgarh Environment Conservation Board which is valid up to 16/04/2024. Copy of the authorization is enclosed at Flag-D		Date: 03/01/2024
27	Statutory compliance	The project proponent shall obtain Consent to Establish / Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (prevention & Control of Pollution) Act 1974 from the concerned State pollution control Board/ Committee.
PPs Submission: Complied Online application for Consent to Establish has been submitted to Chhattisgarh Environment Conservation Board (CECB) on 22/07/2019 The Consent to Establish was granted by CECB Ref.no. 8779/TS/CECB/2021,dated 08/01/2021 for Five Years.		Date: 03/01/2024
28	AIR QUALITY MONITORING AND PRESERVATION	The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through labs recognized under Environment (Protection) Act, 1986.
PPs Submission: Complied Fugitive emissions are being monitored every quarter & report submitted to regulatory agencies.		Date: 03/01/2024
29	AIR QUALITY MONITORING AND PRESERVATION	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.
PPs Submission: Complied Air Pollution Control (APC) systems have been provided for all the dust generating points including fugitive dust from all vulnerable sources. The stack & fugitive emissions monitored are meeting the standards..		Date: 03/01/2024
30	AIR QUALITY MONITORING AND PRESERVATION	The project proponent shall provide leakage detection and mechanised bag cleaning facilities for better maintenance of bags.
PPs Submission: Complied Diligent maintenance of Bags is being done & are replaced whenever there are leakages.		Date: 03/01/2024
31	AIR QUALITY MONITORING AND PRESERVATION	Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads. shop floors, roofs, regularly.
PPs Submission: Complied Vacuum cleaners are being used to clean plant roads. Shop floor etc, regularly.		Date: 03/01/2024

32	AIR QUALITY MONITORING AND PRESERVATION	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.
PPs Submission: Complied Iron ore fines, coal and coke fines, lime fines and such other fines collected in the pollution control devices are being recycled back to the process after appropriate treatment. A briquetting/ agglomeration plant on BOO basis will be installed in next 3 years for increasing the utilization of process sludges/dusts		Date: 03/01/2024
33	AIR QUALITY MONITORING AND PRESERVATION	The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R 277 (E) dated 31st March 2012(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.
PPs Submission: Complied 31 nos of CEMs have been installed covering all the process stacks and connected to SPCB and CPCB online servers and calibration of this system is being carried-out from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.		Date: 03/01/2024
34	AIR QUALITY MONITORING AND PRESERVATION	The project proponent shall install Dry Gas Cleaning Plant with bag filter for Blast Furnace and-SMS convertor- (to be decided on case to case basis depending on type and size of plant)
PPs Submission: Complied At BSP consultant MECON has recommended wet gas cleaning systems for BF's & SMS convertors as the Dry Gas Cleaning Plant are not feasible.		Date: 03/01/2024
35	AIR QUALITY MONITORING AND PRESERVATION	Dry quenching (CDQ) system shall be installed along with power generation facility from waste heat recovery from hot coke
PPs Submission: Complied Dry quenching (CDQ) system along with power generation facility for waste heat recovery from hot coke has been installed for Coke Oven Battery-11.		Date: 03/01/2024
36	WATER QUALITY MONITORING AND PRESERVATION	Water meters shall be provided at the inlet to all unit processes in the steel plants
PPs Submission: Complied • Water meters are installed at strategic locations to measure water flow to the process plants.		Date: 03/01/2024
37	Noise Monitoring & Prevention	Noise monitoring and prevention
PPs Submission: Complied • Regular noise monitoring is done at all the potential high noise generating areas like BF's, Power plants, Rolling Mills etc . • Acoustic enclosures, silencers etc have been provided at all the high noise zones to prevent workmen to the high noise exposure.		Date: 03/01/2024
38	WATER QUALITY	The project proponent shall make efforts to minimise water

	MONITORING AND PRESERVATION	consumption in the steel plant complex by segregation of used water, practicing cascade use and by recycling treated water
PPs Submission: Complied • Water consumption in the steel plant is being reduced through adoption of local recycling systems for all the Modernization units (URM,BRM, SMS-3 & BF-8). • The effluents from older units are being recycled back to cooling pond after treatment for re-use as industrial water.		Date: 03/01/2024
39	ENERGY PRESERVATION MEASURES	The project proponent shall provide TRTs to recover energy from top gases of Blast Furnaces
PPs Submission: Complied At new BF-8, TRTs to recover energy from top gases of Blast Furnace has been installed.		Date: 04/01/2024
40	WATER QUALITY MONITORING AND PRESERVATION	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 3ts(March 2012 {Integrated iron & Steel}); G.S.R 414(E) dated 30 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 recognised under Environment (Protection) Act 1986 or NABL accredited laboratories
PPs Submission: Complied continuous effluent monitoring systems have been installed for all three plant outlets Vlz Outlet-A, B & C and are connected to SPCB and CPCB online servers Calibration of the systems is being carried-out regularly.		Date: 03/01/2024
41	WATER QUALITY MONITORING AND PRESERVATION	Garland drains and collection pits shall be provided for each stock pile to arrest the runoff in the event of heavy rains and to check the water pollution due to surface run off
PPs Submission: Complied Garland drains and collection pits have been provided at the Raw Material handling area to check the water pollution due to surface run off		Date: 03/01/2024
42	WATER QUALITY MONITORING AND PRESERVATION	The project Proponent shall monitor regularly ground water quality at least twice a year (pre and post monsoon) at sufficient numbers of piezometer /sampling wells in the plant and adjacent areas through labs recognised under Environment (protection) act, 1986 and NABL accredited laboratories.
PPs Submission: Complied Ground water quality monitoring at least twice a year (pre and post monsoon) in the adjacent areas through labs recognised under Environment (protection) act, 1986 and NABL accredited laboratories is being carried-out		Date: 03/01/2024
43	WATER QUALITY MONITORING AND PRESERVATION	Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.
PPs Submission: Complied A 30 MLD sewage recycling plant has been installed for treatment of recycling of domestic sewage generated in the Township.		Date: 03/01/2024
44	WATER QUALITY MONITORING AND	The project proponent shall submit monthly summary report of continuous effluent monitoring and results of manual effluent testing

	PRESERVATION	and manual monitoring of ground water quality to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.
PPs Submission: Complied Monthly summary report of continuous effluent monitoring and results of manual effluent testing and manual monitoring of ground water quality reports (October-2021 to March-2022) are enclosed (Flag-F)		Date: 03/01/2024
45	WATER QUALITY MONITORING AND PRESERVATION	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 amended from time to time.
PPs Submission: Complied At BSP ETP for coke oven and by-product plant has been installed and is working effectively and meeting the standards prescribed in G.S.R 277 (E) dated 31st March 2012 (integrated iron & Steel);		Date: 03/01/2024
46	WATER QUALITY MONITORING AND PRESERVATION	Tyre washing facilities shall be provided at the entrance of the plant gates
PPs Submission: Complied Complied.		Date: 03/01/2024
47	WATER QUALITY MONITORING AND PRESERVATION	CO2 injection shall be provided in GCP of SMS to reduce pH in circulating water to ensure optimal recycling of treated water for converter gas cleaning
PPs Submission: Complied At SMS, pH in circulating water of GCPs is being maintained through addition of Use of Dispersant Surfactant. The option of CO2 injection is also being explored.		Date: 03/01/2024
48	WATER QUALITY MONITORING AND PRESERVATION	The project proponent shall practice rainwater harvesting to maximum possible extent
PPs Submission: Complied • At present rain water harvesting is being done from the rooftops of Plate Mill & Machine Shop-II area. Approx. 71500 m3 rain water is channelized to Maroda-I reservoir through storm water drains. • Recharge pits were constructed near 73 existing borewell to arrest the over flow /excess water. • Rain Water Harvesting structure were installed at T A Building, Bhilai Niwas, Bhilai Technical Institute, S.S School Sector-VII & G.S.S School-V. • 5 Recharge ponds were dug in Bhilai Township (Sector-3 near FSNL, Sector-3 near BTI Hostel, Sector-5 behind Andhra Bhawan, Hospital Sector near D-23, Jayanti Stadium) with recharge bore well at middle bottom of pond at two locations. • 1 big recharge pond of about 1 lac m3 capacity was made Behind Bhilai Institute of Technology (BIT) near Bhilai House with bore well at Centre.		Date: 03/01/2024
49	WATER QUALITY MONITORING AND PRESERVATION	Treated water from ETP of CCIBP shall not be used for coke quenching
PPs Submission: Complied • At COB#11 dry quenching system has been installed.		Date: 03/01/2024
50	Noise Monitoring & Prevention	The ambient noise levels should conform to the standards prescribed under E(P)A Rules. 1986 viz.75 dB(A) during day time

		and 70 dB(A) during night time
PPs Submission: Complied Regular Noise monitoring is being done at different locations of township (Market area, schools, hospitals, residential area) and ambient noise levels are meeting the standards (Flag-G)		Date: 03/01/2024
51	Noise Monitoring & Prevention	Noise level survey shall be carried as per the prescribed guidelines and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report
PPs Submission: Complied Noise level survey is being carried as per the prescribed guidelines and report in this regard is enclosed (Flag-G)		Date: 03/01/2024
52	ENERGY PRESERVATION MEASURES	Use torpedo ladle for hot metal transfer as far as possible. If ladles not used, provide covers for open top ladles
PPs Submission: Complied At new BF-8, torpedo ladle is being used for hot metal transfer		Date: 04/01/2024
53	WASTE MANAGEMENT	Tar Sludge and waste oil shall be blended with coal charged in coke ovens (applicable only to recovery type coke ovens)
PPs Submission: Complied At BSP Tar Sludge is being blended with coal charged in coke ovens & waste lubrication oil is being treated in a separate oil reclamation unit and recycled back after recovery/regeneration. The skimmed oil is being sold to authorized recyclers		Date: 04/01/2024
54	ENERGY PRESERVATION MEASURES	Explore feasibility to install WHRS at Waste Gases from BF stoves; Sinter Machine; Sinter Cooler, and all reheating firm aces and if feasible shall be installed
PPs Submission: Complied Waste heat recovery systems have been installed at Sinter Plants, Coke ovens, Blast Furnaces, Power Plants. WHRS systems have also been installed in new units under Modernization In future more such units will be installed based on feasibility.		Date: 04/01/2024
55	ENERGY PRESERVATION MEASURES	Restrict Gas flaring to < 1%
PPs Submission: Complied Complied/Noted.,		Date: 04/01/2024
56	ENERGY PRESERVATION MEASURES	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
PPs Submission: Complied 2x100 Kw solar power generation on roof tops of Bhilai Niwas has been installed & provision for online monitoring & recording of the power generation has also been developed.		Date: 04/01/2024
57	WASTE MANAGEMENT	The waste oil, grease and other hazardous waste like acidic sludge from pickling, galvanising chrome plating mills etc. shall be disposed of as per the Hazardous & Other waste (Management & Trans boundary Movement) Rules, 2016. Coal tar sludge / decanter shall be recycled to coke ovens

PPs Submission: Complied The acid sludge & other hazardous wastes are disposed of as per the Hazardous & Other waste (Management & Trans boundary Movement) Rules, 2016. Coal tar sludge / decanter is being recycled to coke ovens or sold to authorized recyclers.		Date: 04/01/2024
58	WASTE MANAGEMENT	In case of Non-Recovery coke ovens, the gas main carrying hot flue gases to the boiler, shall be insulated to conserve heat and to maximise heat recovery
PPs Submission: Complied NA, At BSP the coke ovens are of recovery type.		Date: 04/01/2024
59	WASTE MANAGEMENT	Waste recycling Plant shall be installed to recover scrap, metallic and flux for recycling to sinter plant and SMS
PPs Submission: Complied At BSP recovery of scrap, metallic and flux is being done. The recovered scrap , iron fines, Lime fines, Mill scales is being recycled to BF & Sinter plants.		Date: 04/01/2024
60	WASTE MANAGEMENT	Carbon recovery plant to recover the elemental carbon present in GCP slurries for use in Sinter plant shall be installed
PPs Submission: Complied Presently BSP is in the process of setting-up a sludge briquetting plant where all the sludges generated from the processes will be used. However BSP will also explore the process of recovery of elemental carbon from GCP sludges in future.		Date: 04/01/2024
61	WASTE MANAGEMENT	An attrition grinding unit to improve the bulk density of BF granulated slag from 1.0 to 1.5 Kg/ I shall be installed to use slag as river sand in construction industry
PPs Submission: Complied All the BF-Granulated slag generated in BSP is being supplied to Cement Industry. In future if & when there is shortage of demand from Cement Industry BSP will offer the slag to construction industry through a viable mechanism.		Date: 04/01/2024
62	WASTE MANAGEMENT	Kitchen waste shall be composted or converted to biogas for further use
PPs Submission: Complied Kitchen waste is composted and used for Horticulture as manure.		Date: 04/01/2024
63	WASTE MANAGEMENT	SMS slag after metal recovery in waste recycling facility shall be conditioned and used for road making, railway hack ballast and other applications. The project proponent shall install a waste recycling facility to recover metallic and flux for recycle to sinter plant. The project proponent shall establish linkage for 100% reuse of rejects from Waste Recycling Plant
PPs Submission: Complied At BSP SMS/BOF slag is being processed into different size fractions and recycled back to Sinter & BF as replacement of flux. BSP is also exploring methodologies for use of BOF slag for road making, railway ballast & other applications. We are seeking the services of Centre for Construction Development & Research National Council for Cement and Building Materials for exploring alternative applications for BOF slag. BSP has given an assignment to NIT-Raipur for assessing the suitability of steel slag as pavement material and feasibility of Steel slag in construction of the rural roads. The final report submitted in June-2021 is being shared with all govt & pvt agencies involved in Construction/road making activities to promote its use as construction/pavement material. Other		Date: 04/01/2024

Central R&D initiatives in SAIL for BOF slag& BF Slag utilization: • Pilot scale project on steam maturing of BOF Slag at BSL, Bokaro • Field trial on assessing suitability of weathered BOF slag as rail track ballasts at BSL, Bokaro • Supply of Air Cooled BF slag for construction of road under Four Laning Project of NH-32at WB • Feasibility study on suitability of BOF Slag for use in cement industry through The Centre for Construction Development & Research of National Council for Cement and Building Materials (NCCBM), under the administrative control of Ministry of Commerce and Industry, Government of India, • Study on use of BOF slag as soil ameliorating agent in agriculture through Indian Agricultural Research Institute (IARI), New Delhi. • Use of steel slag in Open Graded Asphalt Friction Courses (OGAFC) through Department of Civil Engineering, IIT Guwahati.		
64	GREENBELT	The project proponent shall prepare GHG emissions inventory for the plant and shall submit the programme for reduction of the same including carbon sequestration including plantation.
PPs Submission: Complied BSP maintains its GHG emissions inventory & also the emission data is submitted to world steel association(WSA) every year under its commitment as member under Climate Action		Date: 04/01/2024
65	WASTE MANAGEMENT	100% utilization of fly ash shall be ensured. All the fly ash shall be provided to cement and brick manufacturers for further utilization and Memorandum of Understanding in this regard shall be submitted to the Ministry's Regional Office
PPs Submission: Complied 100% utilization of fly ash as per Fly-ash rules is being followed at BSP. At BSP fly ash generation is very less as the boilers are run mostly on By-product gases generated from steel plant operations. The limited quantity of ash generated is being used for reclamation of low lying areas within the plant premises as per the fly-ash rules.		Date: 04/01/2024
66	WASTE MANAGEMENT	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
PPs Submission: Complied Being Complied.		Date: 04/01/2024
67	PUBLIC HEARING	Provision shall be made for the housing of construction labour 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. The housing may be in the form of temporary structures to be removed after the completion of the project
PPs Submission: Complied Complied (At BSP major expansion job has already been completed)		Date: 04/01/2024
68	PUBLIC HEARING	Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented
PPs Submission: Complied At BSP all departments have prepared their own Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan. The documents are approved by Factory Inspector. Regular mock-drills are organized to check the effectiveness of the EPP/DMPs and are updated based on the mock drill review and also based on recommendations from expert agencies engaged to review the safety management of BSP		Date: 04/01/2024
69	Corporate Environmental	The project proponent shall comply with the provisions contained

	Responsibility	in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 1st May 2018, as applicable, regarding Corporate Environment Responsibility
PPs Submission: Complied • BSP has initiated action for completion of all identified CER activities/projects committed in the reply to the ADS letter dated 02.01.2019. • Due to the prevalence of COVID pandemic there has been delay in completion of the projects. • However, presently the CER projects are progressing well & likely to be completed by March-2024. A detailed status report on CER activities enclosed at Flag-C		Date: 04/01/2024
70	Corporate Environmental Responsibility	Self-environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.
PPs Submission: Complied Environmental Audits under EMS:ISO:14001 are being carried-out every year through external agencies. The Last Audi was carried-out by M/s.TUV-Nord in August-2020.		Date: 04/01/2024
71	Corporate Environmental Responsibility	All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Iron and Steel plants shall be implemented
PPs Submission: Complied Complied		Date: 04/01/2024
72	PUBLIC HEARING	Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act
PPs Submission: Complied Being Complied. Occupational health surveillance of the workers is being done regularly.		Date: 04/01/2024
73	Corporate Environmental Responsibility	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
PPs Submission: Complied • BSP has a separate Environmental Department with well-equipped laboratory. • Adequate Qualified executive & non-executive personnel have been posted to the department & Lab • The department is headed by a senior officer of the rank of General Manger who reports to Executive Director (works). • At corporate level a separate environment management Division has been set-up . • At corporate level the division is headed by Executive Director who reports to Director (technical)		Date: 04/01/2024
74	Corporate Environmental Responsibility	The Company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements / deviation/ violation of the environmental / forest/ wildlife norms/ conditions. The company shall have defined system of reporting infringements/ deviation/ violation of the environmental / forest/ wildlife norms/ conditions and / or shareholders /stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six –monthly report
PPs Submission: Complied BSP has well laid down environmental policy duly approve by the Board of Directors. An SOP for reporting of the non-compliance / infringements to Board of Directors (BoD) is also being followed. Accordingly, • Complying to MoEFCC OM dtd. 26th April 2011, status of statutory compliances is reported to Board on quarterly basis & in case of non-compliance received by statutory authorities it		Date: 04/01/2024

is reported to Board along with action plan in the next board meeting. • The Board Meetings are held once every month. • All the Environment & related Clearances & status of compliances are shown on company's website. Other information: • As per the Annexure-IV of the Department of Public Enterprises (DPE) Guidelines on Corporate Governance and Part-A of the Schedule-II of SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015, detailed information in respect of fatal or serious accidents, dangerous occurrences, any material effluent or pollution problems, is placed before the Board of Directors of SAIL. • As per the Part-A of Schedule-III of Securities Exchange Board of India (SEBI)'s (Listing Obligations and Disclosure Requirements) Regulations, 2015, occurrence of emergency, accidents, etc., if material in nature, is disclosed to the Stock Exchanges through Board of Directors within 24 hours.			
75	GREENBELT	Green belt shall be developed in an area equal to 33% of the plant area with a native tree species in accordance with CPCB guidelines. The greenbelt shall inter alia cover the entire periphery of the plant	
PPs Submission: Complied • BSP has planted 4540942 nos of trees in an area covering about 1885 hectares till Sep.-2023. • In the year 2023-24 BSP has been planted 25942Trees. 25650 saplings planted at Township and its surrounding area of Bhilai. Work awarded to C.G. Van Vikas Nigam. • In the year 2022-23(April-March), BSP has planted 21210 trees within the plant premises & township covering an area of about 20-25 hectares. • Further Green belt required to be developed to meet the 33% criteria is about 280 Hectares . However by excluding the two reservoirs/cooling ponds area of 1100 hectares from the total area of the project, BSP's green belt coverage comes to 36.34 %.			Date: 04/01/2024
76	PUBLIC HEARING	The project proponent shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protection Equipment(PPE) as per the norms of Factory Act	
PPs Submission: Complied National occupation Health Centre (NOHC) set-up at BSP regularly carry out heat stress analysis for the workmen who work in high temperature work zone . All the workmen are mandatorily provided with Personal Protection Equipment(PPE) as per the norms of Factory Act			Date: 04/01/2024
77	MISCELLANEOUS	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	
PPs Submission: Complied Complied. The monitoring data is being displayed at the Company's main gate & in a public place/market area located in Township through large electronic Display Boards. The monitored data is also placed in Company's web portal			Date: 04/01/2024
78	MISCELLANEOUS	The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government	
PPs Submission: Complied Complied			Date: 04/01/2024
79	MISCELLANEOUS	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory	
PPs Submission: Complied Agreed			Date: 04/01/2024
80	MISCELLANEOUS	The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions	

PPs Submission: Complied Agreed		Date: 04/01/2024
81	MISCELLANEOUS	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
PPs Submission: Complied Agreed		Date: 04/01/2024
82	MISCELLANEOUS	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
PPs Submission: Complied Complied		Date: 04/01/2024
83	MISCELLANEOUS	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
PPs Submission: Complied Complied		Date: 04/01/2024
84	MISCELLANEOUS	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
PPs Submission: Complied Complied		Date: 04/01/2024
85	MISCELLANEOUS	The project proponent shall submit the environmental statement for each financial year in Form-Y 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
PPs Submission: Complied Complied		Date: 04/01/2024
86	MISCELLANEOUS	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
PPs Submission: Complied Complied		Date: 04/01/2024
87	MISCELLANEOUS	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
PPs Submission: Complied Complied		Date: 04/01/2024
88	MISCELLANEOUS	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)
PPs Submission: Complied Will be Complied/agreed		Date: 04/01/2024
89	MISCELLANEOUS	Concealing factual data or submission of false /fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment(Protection) Act, 1986
PPs Submission: Complied Agreed		Date: 04/01/2024
90	MISCELLANEOUS	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
PPs Submission: Complied Agreed		Date: 04/01/2024
91	Corporate Environmental Responsibility	Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of, action plan shall be reported to the Ministry/ Regional Office along with the Six Monthly Compliance Report.
PPs Submission: Complied Complied. A detailed action plan for implementation of EMPs along allocation of funds has been prepared progress is being monitored on regular basis. Copy of the progress of implementation of action plan is enclosed Flag-H		Date: 03/07/2024
92	MISCELLANEOUS	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
PPs Submission: Complied Complied. Environmental clearance granted to BSP has been placed in the web portal of SAIL.		Date: 04/01/2024

Visit Remarks

Last Site Visit Report Date:

N/A

Additional Remarks:

FLAG-A

**Safety
Mock
Drill**

April'23 to Sep.'23

ENERGY MANAGEMENT DEPARTMENT
BHILAI STEEL PLANT

SUB: MOCK DRILL CONDUCTED AT GAS CLEANING PLANT-7(GCP-7), EMD. Dated:30/05/2023

Incident in Brief:

On 30/05/2023 morning 11 AM, EMD Mech. group was engaged in bolt revisioning job of Demister float valve at Gas Cleaning Plant-7(GCP-7). CO concentration of the site before start of the job was monitored by portable CO monitor and was nil. At 11.35 PM, Mr. Sanjay Patnayak and Mr. Anil Mahanand, both contractual workers who were engaged in the above mentioned job noticed sudden leakage of gas from flange due to rupture of packing of the flange. Mr. Sanjay informed about the incident to Mr. Sunil Kumar, OCT, Supervisor on site who was coordinating the same job. The portable CO monitor of Sanjay started showing concentration above 2000 ppm. The group immediately moved away from the leakage site. Meanwhile, Sanjay Patnaik and Anil Mahanand felt uneasiness. They sat down on the ground and fell unconscious. Mr. Sunil Kumar, Supervisor, immediately alerted about the incident to the other members near by and instructed them move to safer place and report at Assembly Point. He immediately rushed to control room and informed the operators about the incident at 11.37 AM. Mr. Aditya, Operator, immediately informed the incident to Energy Centre and Mr. Ajay Gajghate (GM & Section i/c). The Siren was blown at 11.37 AM by the other operator to alert the persons about the abnormal incident. Immediately, all the working persons of GCP-7 complex reported at Assembly Point. Meanwhile, Energy Centre shift i/c informed about the incident to various agencies/persons (annexture-1 attached). Mr. N K Verma, Assistant Manager (GCPs-EMD) took the charge of Incident Controller of the site, barricaded the gas affected area and managed the situation till Mr. Rakesh Joshi, Chief Incident Controller arrived at the site. All the agencies/persons (except Civil Defence) immediately reached at GCP-7. Firstly, Fire Brigade rescued the two affected persons and sent to MMP in ambulance. Fire brigade searched the area for any other affected persons and found none. Head counting was carried out at Assembly point and found normal. Meanwhile, CISF had cordoned off the road and affected site. Later on, Gas Safety team arrested the gas leakage and after confirming CO concentration nil in the area, they gave clearance to Mr. Rakesh Joshi (CGM & Chief Incident Controller) EMD. Finally, the Siren sound was blown to declare normalcy at 11.53 AM. Meanwhile, the two gas affected persons were taken to Main Medical Post at 11.55 AM. After giving treatment they were discharged at 12.30 PM from MMP.

Post Mock Drill review Meeting:

Post Mock drill review meeting was held at Office of CGM (EMD) immediately after the mock drill to discuss about the incident and the drill carried out.

Observations:

1. All the persons and agencies except Civil Defence reached the site with required preparedness in time.
2. The communication system, rescue & evacuation, cordon off, risk mitigation and medical service found satisfactory.

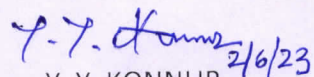
3. The location board, Assembly Point, route signage, Siren, Wind Socks, Emergency control phone numbers, fixed and portable CO monitors, first aid kit and breathing apparatus, exist at the site.
4. Patients shifting in ambulance from Fire Brigade stretcher to ambulance stretcher took some time due to ambulance stretcher was not properly positioned.
5. Overall the Mock drill was conducted satisfactorily.

Members Present at Post Mock Drill Review meeting:

1. Rakesh Joshi, (CGM)EMD
2. B. K. Sinha, (GM i/c)EMD
3. S. K. Dashore, GM(EMD)
4. Bonya Mukherjee, GM, Energy centre(EMD)
5. S. Ramani, GM, Gas safety(EMD)
6. Y. Y. Konnur, GM & DSO(EMD)
7. V. P. S. Dhama, DY CFO(FIRE BRIGADE)
8. S R Dhruw, Sr Mgr, GS(EMD)
9. Ashok Thakur, AM, Energy CentreAM(EMD)
10. S. Deshpande, S. MGR(SED)
11. Roshan, Inspector(CISF)

Annexure-1

S.NO	AGENCY/PERSON	INFORMED TIME	
1	Information to Energy centre and Section I/C by GCP-7 operator.	11.37 AM	
	Information by Energy Centre to following agencies/persons		ARRIVAL TIME
2	Fire brigade	11.38 AM	11.45 AM
3	MMP	11.39 AM	11.44 AM
4	Gas Safety	11.40 AM	11.46 AM
5	CISF	11.43 AM	11.48 AM
6	HOD	11.40 AM	11.45 AM
7	DSO	11.40 AM	11.45 AM
8	SED	11.41 AM	11.48 AM
9	Plant control	11.41 AM	-
10	Civil Defence	11.43 AM	-
11	Energy centr I/C	11.41 AM	-


 Y Y KONNUR
 GM & DSO(EMD)
 वाय.वाय.कोन्नुर/Y.Y.KONNUR
 विभागीय सुरक्षा अधिकारी/महाप्रबंधक/DSO/GM
 ऊ.प्र.वि./E.M.D.
 मि.इ.सं./B.S.P.

FLAG-B

Safety Training Details

April'23 to Sep'23

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Safety Training For Non-Executives:

S.NO	Module	# Prog	Date	#Participant	Total #
1.	Safety Training On Human Factor.	2	04.04.23	33	64
			05.04.23	31	
2.	Safety In Traffic Operation.	1	06.04.23	10	10
3.	Interaction On Safety Encouragement and Engagement. (i-SEE)- For Safety Warriors	1	07.04.23	15	15
4.	Safety In Welding And Gas Cutting	1	26.04.23	18	18
5.	General Properties of By-Product Fuel Gases.	1	27.04.23	18	18
6.	Safety Circle Training.	1	28.04.23	26	26
Total Number of Programme Conducted		7	Total Participants =		151

Safety Training For Executives:

S.NO	Module	# Prog	Date	#Participant	#Total
1.	Standard's Awareness On Permit to Work.	1	10.04.23	21	21
2.	Standard's Awareness On Working at Height.	1	11.04.23	21	21
3.	Standard's Awareness On Energy Isolation.	1	12.04.23	24	24
4.	Standard's Awareness On PPE's.	1	17.04.23	20	20
5.	Standard's Awareness On HIRA/JSA.	1	18.04.23	23	23
6.	Standard's Awareness On Confined Space.	1	19.04.23	13	13
7.	Defensive Driving For FOUR Wheelers	5	01.04.23	21	21
			08.04.23	21	21
			15.04.23	19	19
			21.04.23	7	7
			29.04.23	15	15
8.	Awareness Programme On High Hazard Process-HHP.	1	20.04.23	15	15
9.	Emergency Preparedness Plan-EPP.	1	24.04.23	21	21
Total Number of Programme Conducted		13	Total Participants =		241

Safety Training For Contractor Workers:

S.NO	Module	# Prog	Date	#Participant	#Total
1.	Safety Refresher Training For Contractor Workers.	1	03.03.23	36	88
2.	Safety Training For Shunting Staff of T & D	1	13.04.23	24	
3.	Safety Training On Human Factor	2	25.04.23	28	
Total Number of Programme Conducted		4	Total Participants =		88

Summary:

- * TOTAL PROGRAMS (For Regular Employees) ORGANISED IN APRIL-2023: 20 (7 NE + 13 Exe.)
- * TOTAL PARTICIPANTS (REG. Employees) ATTENDED IN APRIL -2023: 392 (151 NE & 241 Exe.)
- * Safety Training for Contract Workers in APRIL 2023: # Prog : 4 Participants: 88
- * Safety Training for Contract Workers at Works Area in APRIL 2023: # Prog : 60 Participants 934

Safety Training Status of Reg. Employees at a Glance:

YEAR	No of Programmes		No. of employees Covered		Total No. of Employees Covered
	Exe.	Non Exe	Exe.	Non Exe.	
Fin.Year-2023-24 (01.04.23-30.04.23)	13	7	241	151	392
Cal. Year-2023 (01.01.23-30.04.23)	42	43	895	987	1882

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Safety Training For Non-Executives:

S.NO	Module	# Prog	Date	#Participant	Total #
1.	Safety Training On Human Factor.	2	02.05.23	22	44
			03.05.23	22	
2.	Safety In Traffic Operation.	1	04.05.23	14	14
3.	Electrical Safety Training.	1	11.05.23	26	26
4.	Behavior Based Safety.	1	15.05.23	32	32
5.	Safety In Material Handling.	1	16.05.23	35	35
6.	General Properties Of By-Product Gases.	1	17.05.23	16	16
7.	Achieving Awareness In Occupational Health & First Aid.	1	18.05.23	23	23
8.	Safety Circle Training.	1	25.05.23	27	27
9.	Safety Training On Near-Miss Cases.	1	26.05.23	23	23
10.	Defensive Driving-Two Wheeler	4	06.05.23	27	77
			13.05.23	22	
			20.05.23	16	
			27.05.23	12	
Total Number of Programme Conducted		14	Total Participants =		317

Safety Training For Executives:

S.NO	Module	# Prog	Date	#Participant	#Total
1.	Standard’s Awareness On Permit to Work.	3	08 , 17 , 18	21+5+5	31
2.	Standard’s Awareness On Working at Height.	3	9 , 19 , 20	19+5+6	30
3.	Standard’s Awareness On Energy Isolation.	2	10, 31	20+5	25
4.	Interaction On Safety Encouragement and Engagement. (i-SEE)- For Safety Warriors	1	12.05.23	20	20
5.	Standard’s Awareness On HHP.	1	22.05.23	13	13
6.	Standard’s Awareness On HIRA/JSA.	2	15 , 16, 23	6+4+21	31
7.	Standard’s Awareness On Confined Space.	2	24 , 30	17+6	23
8.	General Safety Awareness Training.	7	6, 10, 12,17, 18, 20, 26	33+60+36+57 +59+62+49	356
9.	Leadership Training	1	16-17.05.23	18	18
10.	HAZOP Training	2	23-24.5.23	19	40
			25-26.5.23	21	
Total Number of Programme Conducted		24	Total Participants =		587

Safety Training For Contractor Workers:

S.NO	Module	# Prog	Date	#Participant	#Total
1.	Safety Refresher Training For Contractor Workers.	1	01.05.23	23	86
2.	Safety Training For Shunting Staff of T & D	1	19.05.23	21	
3.	Safety Training On Human Factor	2	29.05.23	19	
			30.05.23	23	
Total Number of Programme Conducted		4	Total Participants =		86

Summary:

- * TOTAL PROGRAMS (For Regular Employees) ORGANISED IN MAY-2023: 38 (14 NE + 24 Exe.)
- * TOTAL PARTICIPANTS (REG. Employees) ATTENDED IN MAY -2023: 904 (317 NE & 587 Exe.)
- * Safety Training for Contract Workers in MAY 2023: # Prog : 4 Participants: 86
- * Safety Training for Contract Workers at Works Area in MAY 2023: # Prog : 29 Participants: 588

Safety Training Status of Reg. Employees at a Glance:

YEAR	No of Programmes		No. of employees Covered		Total No. of Employees Covered
	Exe.	Non Exe	Exe.	Non Exe.	
Fin.Year-2023-24 (01.04.23-31.05.23)	37	21	828	468	1296
Cal. Year-2023 (01.01.23-31.05.23)	66	57	1482	1304	2786

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Safety Training For Contractor Workers:

S.NO	Module	# Prog	Date	#Participant	#Total
1.	Safety Refresher Training For Contractor Workers.	1	01.06.23	38	95
2.	Safety Training For Shunting Staff of T & D	1	16.06.23	21	
3.	Safety Training On Human Factor	2	27.06.23	13	
			28.06.23	23	
Total Number of Programme Conducted		4	Total Participants =		95

Summary:

- * TOTAL PROGRAMS (For Regular Employees) ORGANISED IN June-2023: 32 (10 NE + 22 Exe.)
- * TOTAL PARTICIPANTS (REG. Employees) ATTENDED IN June -2023: 923 (207 NE & 716 Exe.)
- * Safety Training for Contract Workers in June 2023: # Prog : 4 Participants: 95
- * Safety Training for Contract Workers at Works Area in June 2023: # Prog : 49 Participants: 850

Safety Training Status of Reg. Employees at a Glance:

YEAR	No of Programmes		No. of employees Covered		Total No. of Employees Covered
	Exe.	Non Exe	Exe.	Non Exe.	
Fin.Year-2023-24 (01.04.23-30.06.23)	59	31	1544	675	2219
Cal. Year-2023 (01.01.23-30.06.23)	88	67	2198	1511	3709

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ഇക്സ്ക്യൂട്ടീവ് ഓഫീസർമാർക്കുള്ള സുരക്ഷാ പരിശീലനം **എക്സിക്യൂട്ടീവ് ഓഫീസർമാർക്കുള്ള**

ഓഫീസ് സുരക്ഷാ പരിശീലനം 2023

തീയതി: 05-08-23

2023 ഓഗസ്റ്റ് 5

Safety Training For Non-Executives:

S.NO	Module	# Prog	Date	#Participant	Total #
1.	Safety In Traffic Operation.	1	04.07.23	19	19
2.	Safety Training On Human Factor.	2	05.07.23	32	59
			06.07.23	27	
3.	Achieving Awareness In Occupational Health & First Aid.	1	07.07.23	28	28
4.	General Properties of By-Product Gases.	1	14.07.23	18	18
5.	Defensive Driving-Two Wheeler	3	01.07.23	25	74
			08.07.23	24	
			15.07.23	25	
Total Number of Programme Conducted		8	Total Participants =		198

Safety Training For Executives:

S.NO	Module	# Prog	Date	#Participant	#Total
1.	Standard's Awareness On Permit to Work.	1	10.07.23	22	22
2.	Standard's Awareness On Working At Height.	1	11.07.23	20	20
3.	Standard's Awareness On Energy Isolation.	1	12.07.23	19	19
4.	i-SEE For Executives.	1	13.07.23	20	20
5.	Standard's Awareness On HIRA/JSA.	1	17.07.23	13	13
6.	Standard's Awareness On HHP	1	18.07.23	12	12
7.	Incident Investigation Training.	1	21-22.07.23	20	20
8.	General Safety Awareness (LGI).	2	21.07.23	52	89
			28.07.23	37	
Total Number of Programme Conducted		9	Total Participants =		215

Safety Training For Contractor Workers:

S.NO	Module	# Prog	Date	#Participant	#Total
1.	Safety Refresher Training For Contractor Workers.	1	03.07.23	38	38
Total Number of Programme Conducted		1	Total Participants =		38

Summary:

- * **TOTAL PROGRAMS (For Regular Employees) ORGANISED IN July-2023: 17 (8 NE + 9 Exe.)**
- * **TOTAL PARTICIPANTS (REG. Employees) ATTENDED IN July -2023: 413 (198 NE & 215 Exe.)**
- * **Safety Training for Contract Workers in July 2023: # Prog : 1 Participants: 38**
- * **Safety Training for Contract Workers at Works Area in July 2023: # Prog : 36 Participants: 578**

Safety Training Status of Reg. Employees at a Glance:

YEAR	No of Programmes		No. of employees Covered		Total No. of Employees Covered
	Exe.	Non Exe	Exe.	Non Exe.	
Fin.Year-2023-24 (01.04.23-31.07.23)	68	39	1759	873	2632
Cal. Year-2023 (01.01.23-31.07.23)	97	75	2413	1709	4122

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Safety Training For Non-Executives:

S.NO	Module	# Prog	Date	#Participant	Total #
1.	Safety Training On Human Factor.	1	04.08.23	30	30
Total Number of Programme Conducted		1	Total Participants =		30

Safety Training For Executives:

S.NO	Module	# Prog	Date	#Participant	#Total
1.	Standard On Barricading & Safety Signage.	1	11.08.23	26	26
2.	i-SEE For Executives.	1	14.08.23	19	19
3.	Incident Investigation Training.	1	18-19.08.23	22	22
4.	Standard On Storage & Handling of Gas Cylinders.	1	21.08.23	15	15
5.	Standard's Awareness On Permit to Work.	1	22.08.23	19	19
6.	Standard On PPE's Management.	1	23.08.23	15	15
7.	Standard On Illumination at Work Place.	1	24.08.23	21	21
8.	Standard's Awareness On Energy Isolation.	1	25.08.23	15	15
9.	Defensive Driving-Four Wheelers.	4	05.08.23	10	51
			12.08.23	13	
			19.08.23	14	
			26.08.23	14	
9.	General Safety Awareness (LGI).	3	11.08.23	37	120
			18.08.23	17	
			24.08.23	66	
10	Contract Safety Management.	2	28-29.08.23	24	24
11	Standard's Awareness On Operation & Maintenance of Conveyor Belts.	1	31.08.23	16	16
Total Number of Programme Conducted		18	Total Participants =		363

Safety Training For Contractor Workers:

S.NO	Module	# Prog	Date	#Participant	#Total
1.	Safety Refresher Training For Contractor Workers.	1	01.08.23	47	47
2.	Safety Training For Shunting Staff of T & D	1	28.08.23	28	28
Total Number of Programme Conducted		2	Total Participants =		75

Summary:

- * TOTAL PROGRAMS (For Regular Employees) ORGANISED IN **August-2023**: 19 (1 NE + 18 Exe.)
- * TOTAL PARTICIPANTS (REG. Employees) ATTENDED IN **August-2023**: 393 (30 NE & 363 Exe.)
- * Safety Training for Contract Workers in **August-2023**: # Prog : 2 Participants: 75
- * Safety Training for Contract Workers at Works Area in **August-2023**: # Prog : 68. Participants: 1235

Safety Training Status of Reg. Employees at a Glance:

YEAR	No of Programs		No. of employees Covered		Total No. of Employees Covered
	Exe.	Non Exe	Exe.	Non Exe.	
Fin.Year-2023-24 (01.04.23-31.08.23)	86	40	2122	903	3025
Cal. Year-2023 (01.01.23-31.08.23)	115	76	2776	1739	4515

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Safety Training For Non-Executives:

S.NO	Module	# Prog	Date	#Participant	#Total
1.	Safety Training On Human Factor.	1	04.09.23	38	38
2.	Safety In Traffic Operation	1	06.09.23	14	14
3.	General Properties of By-Product Fuel Gases.	1	08.09.23	17	17
4.	Safety In Material Handling	1	13.09.23	20	20
5.	Chemical Safety For COCCD	1	22.09.23	19	19
6.	Defensive Driving For Two Wheelers.	4	02.09.23	20	20
			09.09.23	21	21
			16.09.23	20	20
			23.09.23	19	29
7.	Train The Trainer On Defensive Driving.	1	05-07.09.23	8	8
8.	Rescue Training (By SWASYA)	1	28.09.23 to 01.10.23	9	9
Total Number of Programme Conducted		11	Total Participants =		215

Safety Training For Executives:

S.NO	Module	# Prog	Date	#Participant	#Total
1.	Contract Safety Management.	5	05-06.08.23	27	121
			07-08.09.23	23	
			12-13.09.23	24	
			14-15.09.23	27	
			25-26.09.23	20	
2.	Standard’s Awareness On Permit to Work.	1	11.09.23	24	24
3.	Standard’s Awareness On Energy Isolation.	1	18.09.23	16	16
4.	i-SEE Training For Executives.	1	20.09.23	22	22
5.	Standard’s Awareness On Confined Space.	1	21.09.23	16	16
6.	Defensive Driving-Four Wheelers.	1	30.09.23	20	20
7.	General Safety Awareness (LGI).	2	01.09.23	53	103
			16.09.23	50	
Total Number of Programme Conducted		12	Total Participants =		322

Safety Training For Contractor Workers:

S.NO	Module	# Prog	Date	#Participant	#Total
1.	Safety Refresher Training For Contractor Workers.	1	01.09.23	36	36
2.	Safety Training For Shunting Staff of T & D	1	07.09.23	20	20
3.	Safety Training For Crane Operator(CW)	1	29.09.23	20	20
Total Number of Programme Conducted		3	Total Participants =		76

Summary:

- * TOTAL PROGRAMS (For Regular Employees) ORGANISED IN September-2023: 23(11 NE + 12 Exe.)
- * TOTAL PARTICIPANTS (REG. Employees) ATTENDED IN September-2023: 537 (215 NE & 322 Exe.)
- * Safety Training for Contract Workers in September-2023: # Prog : 3 Participants: 76
- * Safety Training for Contract Workers at Works Area in September-2023: # Prog : 67 Participants: 1073

Safety Training Status of Reg. Employees at a Glance:

YEAR	No of Programs		No. of employees Covered		Total No. of Employees Covered
	Exe.	Non Exe	Exe.	Non Exe.	
Fin.Year-2023-24 (01.04.23-30.09.23)	98	51	2444	1118	3562
Cal. Year-2023 (01.01.23-30.09.23)	127	87	3098	1954	5052

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FLAG-C

Activity / Projects being carried out through Budget for ESC
(Enterprise Social Commitment)/ CER

Corporate Environment Responsibility

Ministry of Environment Forests & Climate change (MoEFCC) has granted Environmental Clearance (EC) vide MoEFCC F.No.J-11011/28/2007-IA-II(I) dated 24.05.2019 for “Revised Configuration of Modernization-cum-Expansion of 7.0 MTPA Bhilai Steel Plant”. The following schemes are to be implemented against Corporate Environment Responsibility (CER) identified during public hearing a value of approx 232.25 Lakhs. For implementation of the CER schemes, management has accorded approval for Rs. 229.75 lakhs under the capital budget.

Status As On September 2023

S. No.	SAIL Plant /Unit	Location	Name of Project/Activity (Brief detail of the project, duration)	Approx. Amount earmarked for the project	Status (as on September 2023)
1.	BSP	Selud,Durg	I. New Bore well fitted with Solar operated pump with storage tank at three places to be provided.	15.00	Completed.
			II. Four Seater Sulabh Shauchalya at Bazar Chowk to be constructed.	6.00	Completed.
			III. Sports equipments for boys and girls to be provided.	0.50	Completed.

S. No.	SAIL Plant /Unit	Location	Name of Project/Activity (Brief detail of the project, duration)	Approx.Amount earmarked for the project	Status (as on September 2023)
2.	BSP	Khapri (Kutelabhata),Durg	I. Construction of Boundary wall of Panchayat Bhawan along with tree plantation all around the periphery .	10.00	Completed.
			II. New Bore wells at 2 locations fitted with Solar operated Pumps to be provided.	10.00	Completed.
			III. Two extra rooms in Govt. Primary School to be constructed.	10.00	Completed.
			IV. Dustbin for 10 villages to be provided	0.50	Completed.
			V. Beautification and tree plantation around Shitala Talab to be provided.	2.00	Completed.

S. No.	SAIL Plant /Unit	Location	Name of Project/Activity (Brief detail of the project, duration)	Approx. Amount earmarked for the project	Status (as on September 2023)
3.	BSP	Dumardih ,Durg	I. Service road from main road cremation ground approx..700 meters to be cemented	10.00	Completed.
			II. Pipeline for drinking water pipeline to be extended further by 1000 m approx.	7.00	Completed.
4.	BSP	Pauwara, Durg	I. Sanitary Pad Machine women group to be provided	3.00	Not started by Contractor. Re-tendering work is in progress.
			II. Pipeline for drinking water pipeline to be extended further by 1000 m approx.	7.00	Tendering process for the same in progress.
			III. Tree plantation at new talab to be provided	1.00	Completed.
			IV. Funds to be provided Sarpanch for cleaning of Wells with supervision / monitoring by BSP.	1.00	Completed.
			V. Syntax tank with pump to be provided at Health Center.	0.25	Completed.

S. N o.	SAIL Plant /Unit	Location	Name of Project/Activity (Brief detail of the project, duration ¹)	Approx.Amount earmarked for the project	Status (as on September 2023)
5.	BSP	Muskan,Durg	I. Garage for School Bus at Muskan School to be constructed.	1.00	Completed.
6.	BSP	Patora, Durg	I. Four Seater Sulabh Shauchalya at Govt. Middle school for boys to be constructed.	3.00	Completed.
			II. Boundary wall at high school of length 165 meter shall be constructed. CC road to be constructed.	15.00	Not started by Contractor. Re-tendering work is in progress.
7.	BSP	Dhuarabhatta, Durg	I. Four seater Sulabh Shauchalya at Khadan Talab for both men and women to be constructed.	12.00	Completed.
			II. Additional 2 class rooms at High school premise to be constructed.	10.00	Completed.
			III. Boundary wall of approx. - 380 meters to be constructed at high school premise	20.00	Completed.

S.No.	SAIL Plant/ Unit	Location	Name of Project/Activity (Brief detail of the project, duration)	Approx. Amount earmarked for the project	Status (as on September 2023)
8.	BSP	Mahakakala-Mudpaar, Durg	I. Pipeline for drinking water pipeline to be extended further by 1000 m approx. meters in ward no 01,06,04	7.00	Completed.
			II. C.C. road to be constructed at ward no 05 for approx. 250 meters.	4.00	Completed.
			III. C.C. road to be constructed at ward no 04 for approx. 250 meters.	4.00	Completed..
			IV. Four seater Sulabh Shauchalya for boys and girls to be constructed.	12.00	Completed.
9.	BSP	Aundhi,Durg	I. Pipeline for drinking water pipeline to be extended further by 1000 m approx.	7.00	Completed.
			II. C.C. road to be constructed from Ward No 14 Ward No 20 Will be taken up through CSR department of BSP	10.00	Completed.
10.	BSP	Pahandor, Durg	I. New Bore wells at required location fitted with solar operated Pumps to be provided.	10.00	Completed.
			II Pipeline for drinking water		Not started by Contractor

S.No.	SAIL Plant/ Unit	Location	Name of Project/Activity (Brief detail of the project, duration)	Approx. Amount earmarked for the project	Status (as on September 2023)
11.	BSP	Bhilai, Durg	I. One E-rickshaw to be provided facilitate the plantation activities	3.00	Completed.
			II. One Power driven portable drilling machine facilitate the plantation activities	1.00	Completed.
12.	BSP	Mahakakhurd, Durg	I. New Bore well fitted with Solar operated pump with storage tank at one place to be provided	5.00	Completed.
			II. Four seater Sulabh Shauchalya for men and women to be constructed	12.00	Completed.
			Total	232.25	

Note :

Bore wells to be fitted with solar pumps through CREDA. Value approx Rs. 45,44,000 PO of value Rs 46,44,085.3 has been placed for Construction of Sulabh Shauchalya at 6 locations.

FLAG-D

Hazardous Wastes Authorization

Details

April'23 to Sep'23



CHHATTISGARH ENVIRONMENT CONSERVATION BOARD

PARYAVAS BHAWAN, NORTH BLOCK, SECTOR -19,

ATAL NAGAR, RAIPUR (C.G.) 492002

E-mail : hocecb@gmail.com, Ph. No. 0771-2512220

No. 7022/HSMD/HO/CECB/2019

Raipur, Date 18/11/2019

To,

**M/s Bhilai Steel Plant,
Ispat Bhawan, Bhilai,
Distt. - Durg (C.G.)**

Sub:- Renewal of authorization under the Hazardous and Other Wastes (Management & Transboundary Movement) Rules, 2016.

Ref :-
1. Grant of authorization No. 956/HO/HSMD/CECB/2018 Dated 17/04/2018.
2. Your Online application no. 2531743 dated 11/03/2019 & Subsequent Correspondence ending dated 03/04/2019.

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The authorization under the Hazardous and Other Wastes (Management & Transboundary Movement) Rules, 2016 is hereby renewed for the period of **Five Years** i.e. from **17/04/2019 to 16/04/2024**. The details of authorization along with terms & conditions are given as per below:-

FORM 2 [See rule 6 (2)]

GRANT OF AMENDMENT AND SUBSEQUENT RENEWAL OF AUTHORIZATION BY STATE POLLUTION CONTROL BOARD TO THE OCCUPIERS, RECYCLERS, REPROCESSORS, REUSERS, USER AND OPERATORS OF DISPOSAL FACILITIES

1. Number of authorization **278/HO/HSMD/CECB/ATAL NAGAR, RAIPUR.**
2. Reference of Online application no. **2531743 dated 11/03/2019 & Subsequent Correspondence ending dated 03/04/2019.**
3. The operator of facility i.e. occupier **M/s Bhilai Steel Plant, Ispat Bhawan, Bhilai, Distt. - Durg (C.G.)** is hereby granted an authorization based on the signed inspection report from RO for generation, collection, storage, transport, treatment, reuse, recycle and disposal of hazardous wastes in the premises situated at **Ispat Bhawan, Bhilai, Distt. - Durg (C.G.).**

Detail of Authorisation

Sl.No.	Category of Hazardous Waste as per the Schedules I, II and III of these rules	Authorised mode of disposal or recycling or utilization or co-processing etc.	Quantity (Tonnes/Annum)
1.	Benzol acid sludge / Acid Tar Sludge (Schedule-I, Cat.No.- 3.3)	Incineration in the CTSDf of other state / co-processing in cement kiln	2500 T/Year
2.	Tar storage tank residue (Schedule-I, Cat.No.- 13.5)	To be sold to authorized reprocessor / Incineration in the CTSDf / co-processing in cement kiln	1500 T/Year
3.	Decanter tank tar sludge (Schedule-I, Cat.No.- 13.4)	To be sold to authorized reprocessor / Incineration in the CTSDf / co-processing in cement kiln	4000 T/Year
4.	Used or spent oil (Schedule-I, Cat.No.- 5.1)	To be sold to authorized recyclers	500 T/Year
5.	Spent solvents (Schedule-I, Cat.No.- 20.2)	To be sold to authorized recyclers	500 T/Year
6.	Oil and grease skimming (Schedule-I, Cat.No.- 35.4)	To be sold to authorized recyclers	100 T/Year
7.	Chemical sludge from waste water treatment (Schedule-I, Cat.No.- 35.3)	Reuse in the coke making process / Incineration in the CTSDf / co-processing in cement kiln	2500 T/Year
8.	Empty barrels/containers/liners contaminated with hazardous chemicals /wastes (Schedule-I, Cat.No.- 33.1)	To be sold to authorized recyclers	275 T/Year
9.	Process acidic residue, filter cake, dust (Schedule-I, Cat.No.- 17.1)	To be disposed in to CTSDf	500 T/Year
10.	Copper Compound (Schedule II, A 66)	To be sold to authorized recyclers	400 T/Year
11.	Lead and Lead Compounds (Schedule II, A 5)	To be sold to authorized recyclers	50 T/Year
12.	Asbestos (Schedule II B 1)	To be disposed in to CTSDf	80 T/Year

(1) The authorization shall be valid for the period of **Five Years** i.e. from **17/04/2019 to 16/04/2024**.

(2) The authorization is subject to the following conditions:

TERMS & CONDITIONS OF AUTHORIZATION

1. The authorization shall comply with the provisions of Environment (protection) Act, 1986 and the rules made there-under.
2. The authorization or its renewal shall be produced for inspection at the request of an officer authorized by the Chhattisgarh Environment Conservation Board.
3. The person authorized shall not rent, lend, sell transfer or otherwise transport the hazardous wastes without obtaining prior permission of the Chhattisgarh Environment Conservation Board.
4. Any unauthorized change in personnel, equipment, or working conditions as mentioned in the application by the person authorized shall constitute a breach of his authorization.
5. The person authorised shall implement Emergency Response Procedure (ERP) for which this authorisation is being granted considering all site specific possible scenarios such as spillages, leakages, fire etc. and their possible impacts and also carry out mock drill in this regard at regular interval of time.
6. The person authorised shall comply with the provisions outlined in the Central Pollution Control Board guidelines on “Implementing Liabilities for Environmental Damages due to Handling and Disposal of Hazardous Waste and Penalty”.
7. It is the duty of the authorized person to take prior permission of the Chhattisgarh Environment Conservation Board to close down the facility.
8. The record of consumption and fate of the imported hazardous and other wastes shall be maintained.
9. Industry shall prepare emergency response plan (ERP) and ensure implementation the same at the event of any accident occurs due to handling and transporting of hazardous waste as per CPCB guideline.
10. The hazardous and other waste which gets generated during recycling or reuse or recovery or pre-processing or utilisation of imported hazardous or other wastes shall be treated and disposed of as per standard operating procedures/guidelines issued by CPCB from time to time.
11. An application for the renewal of an authorisation shall be made three months before the expiry of authorization as laid down in the Rules.
12. Annual return in form IV shall be filed by June 30th for the period ending 31st March of the last financial year.
13. The wastes shall be collected and stored properly with adequate safety measures as per rule.
14. Authorized person shall comply with the provisions of rule 17, 18 and 19 for packing, labeling and transport of Hazardous Waste.
15. The authorized person should maintain the record of Hazardous Waste as per Form-3 of Hazardous and Other Wastes (Management & Transboundary Movement) Rules, 2016.
16. The occupier shall follow the guidelines (if any) issued by Central Pollution Control Board or MoEF & CC for management of Hazardous waste from time to time.
17. The industry shall display data outside factory gate on quantity and nature of hazardous chemicals and wastes being used in the plant, water and air emissions and solid wastes generated within the factory premises.
18. Industry shall ensure disposal of hazardous waste generated during the production process through authorized recycler/Co-processing in cement plant/captive disposal facility/arrangement for sharing of authorized disposal facility/common TSDF as per rule. Failing which this authorization shall be treated as cancelled and appropriate action would be initiated against the industry.

19. Industry shall create new website for Hazardous and Other Wastes (Management & Transboundary Movement) Rules, 2016 and upload all the information above the waste in the website.
20. The waste must be given thermal/biological/physico-chemical treatment; the waste should be completely dewatered, detoxified, and proper conditioned and any possible recovery is made before their disposal.
21. The industry should constitute a hazardous waste management cell to take care of the management aspect to the hazardous waste generated in the plant.
22. An on-site storage of the hazardous wastes for a maximum period of 90 days should be provided and it shall be ensured that there is no leakage or seepage from the surrounding walls or bottom. The site should be covered and properly protected to prevent the entry of rain water in storage area.
23. At least four nos. of peizometric points should be provided around the storage site of H.W. to monitor the leaching of the waste and monitoring report shall be submitted to the board in every six months. Each type of waste shall be stored in a separate storage cell.
24. The discarded containers of Hazardous waste and chemical shall not be used for storage of food grade products. At the storage site "Hazardous waste storage site & danger signboard" shall be provided with all safety devices.
25. In the event of any accident due to handling of hazardous waste the authorized person must inform immediately to the Concerned Regional Office and H.O., Atal Nagar, Raipur of the Board by fax/telephone or by E-mail about the incident and details report be sent in form no. 11 [see rule 22].
26. The authorization obtained by the Chhattisgarh Environment Conservation Board should be prominently displayed.
27. Used batteries shall be disposed of as per the Batteries (Management & Handling) Rules, 2001.
28. Board reserves the right to cancel/amend the above condition and add new conditions as and when deemed necessary.

Member Secretary
C.G. Environment Conservation Board
Atal Nagar, Raipur (C.G.)

Endt. No. 7023/H.O./HSMD/CECB/2019 Atal Nagar, Raipur, Date 18/11/2019

Copy to :- Regional Officer, Regional office, Chhattisgarh Environment Conservation Board, Durg (C.G.) please ensure compliance and report, if any condition/conditions are violated by the industry.

**Sd/- Member
Secretary**
C.G. Environment Conservation Board
Atal Nagar, Raipur (C.G.)

FLAG E

E-1

Stack emission

April'23 to Sep'23

BHILAI STEEL PLANT
April 2023 to September 2023

Month- April 2023

Stack emission											
Name of the Plant (1)	Stack connected to (Name of the unit) (2)	Height of the stack (m) (3)	Diameter of the stack (m) (4)	Pollution Control unit provided (Name) (5)	Date & Time of the monitoring (duration) (6)	Production fig. of the unit, during the period of monitoring (7)	Flow rate of the flue gas (8)	Parameters (whichever are applicable) (9)			
								Particulate matter(PM) (Norm:50mg/Nm3)	SO ₂ (250mg/Nm3)	NO _x (150mg/Nm3)	CO (Norm: 1%)
Blast Furnace											
BF-4 (Process)	Stoves	60	2.5	--do--	12 Apr, 10:00-11:10 (70 Minute)	1882	106061	21.87	208.00	56.90	0.57% V/V
BF-5 (Process)	Stoves	60	3.5	--do--	12 Apr, 11:30-12:30 (60 Minute)	2105	133372	20.59	196.00	61.30	0.55% V/V
BF-8 (Process)	Stoves	70	3.5	--do--	15 Apr, 10:20-11:20 (60 Minute)	7510	163634	18.21	189.00	95.00	0.53% V/V
SMS-2											
LF-1	Ladle Furnace	60	1.65	Bag Filter	28 Apr, 10:10-11:00 (50 Minute)	2160	125527	47.37	68.90	-	-
LF-2	Ladle Furnace	50	1.50	Bag Filter	19 Apr, 10:05-11:50 (45 Minute)	1920	109283	32.04	58.50	-	-
SMS-3											
SMS –3 (DDSY (Secondary))	Liquid Steel	-	-	ESP	29 Apr, 12:00-12:35 (35 Minute)	-	-	37.64	-	-	-
Stack emission											
Name of the Plant (1)	Stack connected to (Name of the unit) (2)	Height of the stack (m) (3)	Diameter of the stack (m) (4)	Pollution Control unit provided (Name) (5)	Date & Time of the monitoring (duration) (6)	Production fig. of the unit, during the period of monitoring (7)	Flow rate of the flue gas (8)	Parameters (whichever are applicable) (9)			
								Particulate matter(PM) (Norm:50mg	SO ₂ (Norm: 800mg/	NO _x (Norm: 500mg/	CO (Norm: 3 kg/T of

BHILAI STEEL PLANT
April 2023 to September 2023

								/Nm3)	Nm3)	Nm3)	Coke
Coke Oven											
Battery No. 1	Battery	100	3.5	Nil	24 Apr, 11:30-12:30 (60 Minute)	860	123354	46.08	220.00	210.56	2.48Kg/T coke
Battery No. 2	Battery	100	3.5	Nil	24 Apr, 10:15-11:15 (60 Minute)	860	120882	47.40	230.56	188.00	2.53Kg/T coke
Battery No. 3	Battery	100	3.5	Nil	26 Apr, 09:30-10:30 (60 Minute)	882	125242	42.31	174.23	147.59	2.50Kg/T coke
Battery No. 5	Battery	100	3.5	Nil	21 Apr, 12:15-01:15 (60 Minute)	838	127211	43.53	330.12	302.68	2.45Kg/T coke
Battery No. 6	Battery	100	3.5	Nil	21 Apr, 11:05-12:05 (60 Minute)	793	116576	45.61	293.44	321.48	2.59Kg/T coke
Battery No. 9	Battery	100	3.5	Nil	20 Apr, 10:30-11:30 (60 Minute)	1488	245971	42.27	118.40	169.20	2.51Kg/T coke
Battery No. 10	Battery	120	4.2	Nil	20 Apr, 11:45-12:45 (60 Minute)	1508	223929	45.82	663.00	169.20	2.53Kg/T coke
Battery No. 11	Battery	120	4.2	Nil	05 Apr, 10:15-11:15 (60 Minute)	1829	185534	40.39	184.70	147.60	2.62Kg/T coke
DCDA Acid Plant	DCDA Acid Plant	40	0.8	Absorption Tower	27 Apr, 11:40-12:20 (40 Minute)	75	10113	-	2.215 Kg/T H ₂ SO4	-	-
A. Stack emission											
Name of the Plant (1)	Stack connected to (Name of the unit) (2)	Height of the stack (m) (3)	Diame ter of the stack (m) (4)	Pollution Control unit provided (Name) (5)	Date & Time of the monitoring(duration) (6)	Production fig. of the unit, during the period of monitoring (7)	Flow rate of the flue gas (8)	Parameters(whichever are applicable)(9)			
								Particulate matter(PM) (Norm:50mg/ Nm3)	SO ₂ (Norm: 600mg/ Nm3)	NO _x (Norm: 600mg/N m3)	CO
SP-2											
SP-2(M/c-1)	Sintering Machine	100	6	ESP	17 Apr, 10:00-10:40 (40 Minute)	1737	234729	47.94	66.70	-	-
SP-2 (M/c-2)	Sintering Machine	100	6	ESP	17 Apr, 11:00-11:35 (35 Minute)	1737	251494	46.86	74.30	-	-

BHILAI STEEL PLANT
April 2023 to September 2023

SP-2 (M/c-3)	Sintering Machine	100	6	ESP	18 Apr, 10:00-10:35 (35 Minute)	1766	242227	48.73	82.40	-	-
SP-2 (M/c-4)	Sintering Machine	100	6	ESP	18 Apr, 11:00-11:40 (40 Minute)	1766	234055	41.96	61.50	-	-
SP-3											
SP-3 (M/c-1)	Sintering Machine	120	7	ESP	04 Apr, 11:10-11:55 (45 Minute)	2380	486508	37.21	-	-	-
SP-3 (M/c-2)	Sintering Machine	120	7	ESP	03 Apr, 11:55-12:35 (45 Minute)	8996	461558	46.94	-	-	-
RMP-2											
LK-2	Vertical Kiln	53.2	1.2	Wet Scrubber	22 Apr, 09:15-10:00 (45 Minute)	82	54112	44.27	70.23	-	-
RK	Rotary Kiln	60	2	Wet Scrubber	22 Apr, 10:10-10:55 (45 Minute)	134	58694	42.91	73.34	-	-
TPP/CPP											
Boiler 1	Boiler	80	4.3	ESP	10 Apr, 11:40-12:25 (45 Minute)	2595	120145	46.21	65.00	84.30	-
Boiler 2	Boiler	80	4.3	ESP	10 Apr, 12:35-01:20 (45 Minute)	2307	118436	46.92	68.50	88.91	-
Boiler 4	Boiler	80	4.3	Wet Scrubber	01 Apr, 10:30-11:15 (45 Minute)	2380	85854	38.09	73.40	105.80	-
Boiler 5	Boiler	80	4.3	ESP	11 Apr, 10:30-11:10 (40 Minute)	2211	119856	40.26	89.60	84.50	-
Boiler 6	Boiler	80	4.3	ESP	11 Apr, 11:20-12:00 (40 Minute)	1633	336121	38.47	96.40	110.30	-
Mills											
Wire Rod Mill	RHF	70	4.2	-	27 April., 12:05-01:05 (60 Minute)	-	-	20.24	-	-	-
Merchant mill	RHF	100	4.2	-	26 April, 12:45-01:45 (60 Minute)	-	-	17.13	-	-	-
Rail Mill	RHF	100	4.2	-	28 April, 02:30-03:30 (60 Minute)	-	-	21.55	-	-	-
Plate Mill	RHF-J2	100	5.0	-	25 April., 12:15-01:15 (60 Minute)	-	-	23.64	-	-	-
BRM	RHF	100	5.0	-	28 April., 10:20-11:20 (60 Minute)	-	-	23.48	-	-	-

BHILAI STEEL PLANT
April 2023 to September 2023

May 2023

Stack emission											
Name of the Plant (1)	Stack connecte d to (Name of the unit) (2)	Height of the stack (m) (3)	Diameter of the stack (m) (4)	Pollution Control unit provided (Name) (5)	Date & Time of the monitoring (duration) (6)	Production fig. of the unit, during the period of monitoring (7)	Flow rate of the flue gas (8)	Parameters (whichever are applicable) (9)			
								Particulate matter(PM) (Norm:50mg/ Nm3)	SO ₂ (250mg/N m3)	NO _x (150mg/N m3)	CO (Norm: 1%)
Blast Furnace											
BF-4 (Process)	Stoves	60	2.5	--do--	13 May, 11:45-12:45 (60 Minute)	2427	123495	27.78	154.26	67.65	0.54% V/V
BF-5 (Process)	Stoves	60	3.5	--do--	20 May, 02:05-03:05 (60 Minute)	2394	120306	20.27	248.56	99.50	0.52% V/V
BF-6 (Process)	Stoves	60	3.5	--do--	20 May, 03:15-04:15 (60 Minute)	1559	119397	19.09	244.00	96.30	0.50% V/V
BF-7 (Process)	Stoves	70	3.5	--do--	06 May, 02:00-03:00 (60 Minute)	2867	107183	24.49	227.00	53.00	0.58% V/V
BF-8) (Process)	Stoves	70	3.5	--do--	06 May, 11:20-12:20 (60 Minute)	7508	175761	26.85	178.00	46.82	0.56% V/V
BF-7 (Space dedusting)				GCP (Scrubber)	18 May, 12:00-12:40 (40 Minute)	-	-	47.90	-	-	-
SMS-2											
LF-1	Ladle Furnace	60	1.65	Bag Filter	23 May, 11:20-11:55 (35 Minute)	2160	125527	47.37	68.70	-	-
LF-2	Ladle Furnace	50	1.50	Bag Filter	23 May, 10:20-11:00 (40 Minute)	1080	110389	40.09	62.20	-	-
SMS-3											
SMS –3 (DDSY (Secondary))	Liquid Steel	-	-	ESP	19 May, 11:05-11:45 (40 Minute)	-	-	43.14	-	-	-

BHILAI STEEL PLANT
April 2023 to September 2023

A. Stack emission											
Name of the Plant (1)	Stack connected to (Name of the unit) (2)	Height of the stack (m) (3)	Diameter of the stack (m) (4)	Pollution Control unit provided (Name) (5)	Date & Time of the monitoring (duration) (6)	Production fig. of the unit, during the period of monitoring (7)	Flow rate of the flue gas (8)	Parameters (whichever are applicable) (9)			
								Particulate matter(PM) (Norm:50mg /Nm3)	SO ₂ (Norm: 800mg/ Nm3)	NO _x (Norm: 500mg/ Nm3)	CO (Norm: 3 kg/T of Coke)
Coke Oven											
Battery No. 1	Battery	100	3.5	Nil	04 May, 11:45-12:45 (60 Minute)	804	121965	34.77	421.50	312.70	2.41Kg/T coke
Battery No. 2	Battery	100	3.5	Nil	04 May, 10:30-11:30 (60 Minute)	804	126215	43.37	243.45	210.60	2.50Kg/T coke
Battery No. 3	Battery	100	3.5	Nil	05 May, 10:00-11:00 (60 Minute)	782	123906	41.29	162.48	128.60	2.47Kg/T coke
Battery No. 5	Battery	100	3.5	Nil	05 May, 11:10-12:10 (60 Minute)	849	122750	44.87	310.00	289.00	2.46Kg/T coke
Battery No. 6	Battery	100	3.5	Nil	05 May, 02:30-03:30 (60 Minute)	815	118265	42.26	267.40	225.00	2.53Kg/T coke
Battery No. 9	Battery	100	3.5	Nil	08 May, 11:05-12:05 (60 Minute)	1427	248309	41.89	111.56	186.08	2.48Kg/T coke
Battery No. 10	Battery	120	4.2	Nil	10 May, 11:40-12:40 (60 Minute)	1528	233926	43.68	652.20	177.51	2.45Kg/T coke
Battery No. 11	Battery	120	4.2	Nil	04 May, 02:00-03:00 (60 Minute)	1809	190999	40.58	167.00	147.30	2.60Kg/T coke
DCDA Acid Plant	DCDA Acid Plant	40	0.8	Absorption Tower	10 May, 10:30-11:20 (50 Minute)	75	10110	-	1.76 Kg/T H ₂ SO4	-	-
A. Stack emission											
Name of the Plant	Stack connected to (Name	Height of the stack (m)	Diame ter of the	Pollution Control unit provided (Name)	Date & Time of the monitoring(duration) (6)	Production fig. of the unit, during the period of monitoring	Flow rate of the flue gas	Parameters(whichever are applicable)(9)			
								Particulate matter(PM)	SO ₂	NO _x	CO

BHILAI STEEL PLANT
April 2023 to September 2023

(1)	of the unit (2)	(3)	stack (m) (4)	(5)		(7)	(8)	(Norm:50mg/ Nm3)	(Norm: 600mg/ Nm3)	(Norm: 600mg/N m3)	
SP-2											
SP-2(M/c-1)	Sintering Machine	100	6	ESP	11 May, 10:10-10:45 (35 Minute)	1162	231045	45.78	65.40	-	-
SP-2 (M/c-2)	Sintering Machine	100	6	ESP	11 May, 10:50-11:25 (35 Minute)	1162	249632	47.44	69.50	-	-
SP-2 (M/c-3)	Sintering Machine	100	6	ESP	16 May, 11:05-11:40 (35 Minute)	1803	247319	41.50	97.30	-	-
SP-2 (M/c-4)	Sintering Machine	100	6	ESP	16 May, 12:00-12:40 (40 Minute)	1803	240534	47.85	75.70	-	-
SP-3											
SP-3 (M/c-1)	Sintering Machine	120	7	ESP	03 May, 11:20-12:00 (40 Minute)	9135	477084	43.92	-	-	-
SP-3 (M/c-2)	Sintering Machine	120	7	ESP	02 May, 10:30-11:10 (40 Minute)	7320	485806	47.27	-	-	-
SP-3, M/c-2 (Space de-dusting)				ESP	18 May, 10:00-11:45 (45 Minute)	-	-	48.50	-	-	-
RMP-2											
LK-2	Vertical Kiln	53.2	1.2	Wet Scrubber	31 May, 12:00-12:35 (35 Minute)	90	54781	43.65	74.50	-	-
RK	Rotary Kiln	60	2	Wet Scrubber	31 May, 11:00-11:40 (40 Minute)	144	59217	45.37	78.00	-	-
TPP/CPP											
Boiler 1	Boiler	80	4.3	ESP	12 May, 10:00-10:40 (40 Minute)	2257	119358	47.30	84.90	115.00	-
Boiler 2	Boiler	80	4.3	ESP	26 May, 11:30-12:10 (40 Minute)	2258	113476	42.77	75.30	97.80	-
Boiler 4	Boiler	80	4.3	Wet Scrubber	12 May, 11:00-11:40 (40 Minute)	2301	83667	45.40	87.20	89.58	-
Boiler 5	Boiler	80	4.3	ESP	01 May, 11:20-12:00 (40 Minute)	2330	122469	44.21	102.34	115.50	-
Boiler 6	Boiler	80	4.3	ESP	01 May, 12:10-12:50 (40 Minute)	1807	337162	40.21	98.70	115.00	-

BHILAI STEEL PLANT
April 2023 to September 2023

Mills											
Wire Rod Mill	RHF	70	4.2	-	19 May, 02:15-03:15 (60 Minute)	-	-	24.44	-	-	-
Merchant mill	RHF	100	4.2	-	29 May, 10:05-11:05 (60 Minute)	-	-	18.62	-	-	-
Rail Mill	RHF	100	4.2	-	19 May, 09:30-10:30 (60 Minute)	-	-	18.90	-	-	-
Plate Mill	RHF-J2	100	5.0	-	22May, 10:50-11:50 (60 Minute)	-	-	20.16	-	-	-
BRM	RHF	100	5.0	-	29 May, 11:15-12:15 (60 Minute)	-	-	18.40	-	-	-
URM	RHF	100	5.0	-	18 May, 09:30-10:30 (60 Minute)	-	-	20.04	-	-	-

BHILAI STEEL PLANT
April 2023 to September 2023

Month- June 2023

A.		Stack emission									
Name of the Plant (1)	Stack connecte d to (Name of the unit) (2)	Height of the stack (m) (3)	Diameter of the stack (m) (4)	Pollution Control unit provided (Name) (5)	Date & Time of the monitoring (duration) (6)	Production fig. of the unit, during the period of monitoring (7)	Flow rate of the flue gas (8)	Parameters (whichever are applicable) (9)			
								Particulate matter(PM) (Norm:50mg/ Nm3)	SO ₂ (250mg/N m3)	NO _x (150mg/N m3)	CO (Norm: 1%)
Blast Furnace											
BF-4 (Process)	Stoves	60	2.5	--do--	17 Jun, 10:45-11:45 (60 Minute)	2404	114061	25.93	160.30	146.80	0.58% V/V
BF-5 (Process)	Stoves	60	3.5	--do--	17 Jun, 12:00-01:00 (60 Minute)	2405	114484	22.37	227.90	109.60	0.54% V/V
BF-6 (Process)	Stoves	60	3.5	--do--	13 Jun, 02:15-03:20 (65 Minute)	2022	111086	23.85	236.40	100.80	0.51% V/V
BF-7 (Process)	Stoves	70	3.5	--do--	09 Jun, 12:00-01:05 (65 Minute)	2936	102242	27.32	197.10	121.36	0.50% V/V
BF-8) (Process)	Stoves	70	3.5	--do--	24 Jun, 10:30-11:30 (60 Minute)	3501	154720	22.40	148.00	101.52	0.45% V/V
BF-5 (Space dedusting)				Bag filter	22 Jun, 11:15-11:55 (40 Minute)	-	-	44.32	-	-	-
BF-6 (Space dedusting)				Bag filter	22 Jun, 12:10-12:50 (40 Minute)	-	-	45.20			
BF-7 (Space dedusting)				GCP (Scrubber)	21 Jun, 10:30-11:10 (40 Minute)	-	-	48.26			
SMS-2											
LF-1	Ladle Furnace	60	1.65	Bag Filter	15 Jun, 11:15-11:45 (30 Minute)	1440	121995	48.90	79.54	-	-
LF-2	Ladle Furnace	50	1.5	Bag Filter	05 Jun, 11:00-11:40 (40 Minute)	3240	115217	43.06	72.50	-	-

BHILAI STEEL PLANT
April 2023 to September 2023

SMS-3											
SMS – 3 (DDSY (Secondary))	Liquid Steel	-	-	-	20 Jun, 11:05-11:45 (40 Minute)	-	-	41.92	-	-	-
A.	Stack emission										
Name of the Plant (1)	Stack connected to (Name of the unit) (2)	Height of the stack (m) (3)	Diameter of the stack (m) (4)	Pollution Control unit provided (Name) (5)	Date & Time of the monitoring (duration) (6)	Production fig. of the unit, during the period of monitoring (7)	Flow rate of the flue gas (8)	Parameters (whichever are applicable) (9)			
								Particulate matter(PM) (Norm:50mg /Nm3)	SO ₂ (Norm: 800mg/ Nm ₃)	NO _x (Norm: 500mg/ Nm3)	CO (Norm: 3 kg/T of Coke)
Coke Oven											
Battery No. 1	Battery	100	3.5	Nil	23 Jun, 10:10-11:15 (65 Minute)	815	110895	41.36	243.50	215.60	2.38Kg/T coke
Battery No. 2	Battery	100	3.5	Nil	23 Jun, 11:25-12:25 (60 Minute)	888	118402	44.74	210.40	183.80	2.45Kg/T coke
Battery No. 3	Battery	100	3.5	Nil	19 Jun, 12:30-01:35 (65 Minute)	882	107940	40.08	160.50	119.58	2.44Kg/T coke
Battery No. 5	Battery	100	3.5	Nil	02 Jun, 09:30-10:35 (65 Minute)	849	108085	45.64	300.24	226.44	2.39Kg/T coke
Battery No. 6	Battery	100	3.5	Nil	02 Jun, 02:10-03:20 (70 Minute)	827	104809	41.75	271.50	220.44	2.55Kg/T coke
Battery No. 9	Battery	100	3.5	Nil	13 Jun, 10:15-11:15 (60 Minute)	1528	230867	43.11	349.56	116.40	2.41Kg/T coke
Battery No. 10	Battery	120	4.2	Nil	13 Jun, 11:30-12:30 (60 Minute)	1568	222863	47.05	442.70	197.40	2.52Kg/T coke
Battery No. 11	Battery	120	4.2	Nil	16 May, 11:15-12:15 (60 Minute)	1548	175244	42.06	283.40	210.60	2.59Kg/T coke
A.	Stack emission										
Name of the Plant (1)	Stack connected to (Name of the unit) (2)	Height of the stack (m) (3)	Diameter of the stack (m) (4)	Pollution Control unit provided (Name) (5)	Date & Time of the monitoring(duration) (6)	Production fig. of the unit, during the period of monitoring (7)	Flow rate of the flue gas (8)	Parameters(whichever are applicable)(9)			
								Particulate matter(PM) (Norm:50mg/Nm 3)	SO ₂ (Norm:60 0mg/Nm 3)	NO _x (Norm: 600mg/Nm 3)	CO

BHILAI STEEL PLANT
April 2023 to September 2023

SP-2											
SP-2 (M/c-1)	Sintering Machine	100	6	ESP	12 Jun, 11:00-11:40 (40 Minute)	1758	219896	44.94	68.54	-	-
SP-2 (M/c-2)	Sintering Machine	100	6	ESP	12 Jun, 10:15-10:50 (35 Minute)	1758	232649	37.78	0.00	-	-
SP-2 (M/c-3)	Sintering Machine	100	6	ESP	21 Jun, 11:30-12:15 (45 Minute)	2180	240744	39.47	67.40	-	-
SP-2 (M/c-4)	Sintering Machine	100	6	ESP	21 Jun, 12:30-01:10 (40 Minute)	2180	234995	43.48	74.00	-	-
SP-3											
SP-3 (M/c-1)	Sintering Machine	120	7	ESP	14 Jun, 11:10-11:55 (45 Minute)	9342	462539	41.84	-	-	-
SP-3 (M/c-2)	Sintering Machine	120	7	ESP	01 Jun, 10:20-11:00 (40 Minute)	9513	493297	46.12	-	-	-
SP-3, M/c-1 (Space dedusting)				ESP	19 Jun, 11:15-11:55 (40 Minute)	-	-	47.60	-	-	-
RMP-2											
LK-1	Vertical Kiln	53.2	1.2	Wet Scrubber	15 Jun, 12:00-12:40 (40 Minute)	72	48719	48.31	66.40	-	-
LK-2	Vertical Kiln	53.2	1.2	Wet Scrubber	29 Jun, 11:10-11:50 (40 Minute)	164	52513	40.87	65.02	-	-
RK	Rotary Kiln	60	2	Wet Scrubber	15 Jun, 12:55-01:40 (45 Minute)	81	54807	46.65	80.54		
TPP/CPP											
Boiler 1	Boiler	80	4.3	ESP	09 Jun, 10:10-10:50 (40 Minute)	2308	119410	46.85	70.00	47.00	-
Boiler 2	Boiler	80	4.3	ESP	09 Jun, 11:00-11:45 (45 Minute)	2369	113120	42.23	39.30	75.20	-
Boiler 3	Boiler	80	4.3	Wet Scrubber	27 Jun, 11:00-11:45 (45 Minute)	1903	82179	35.58	59.30	68.40	-
Boiler 4	Boiler	80	4.3	Wet Scrubber	07 Jun, 10:05-10:45 (40 Minute)	2185	84526	43.15	117.40	131.20	-
Boiler 5	Boiler	80	4.3	ESP	08 Jun, 12:00-12:40 (40 Minute)	2095	122189	45.67	110.54	111.08	-
Boiler 6	Boiler	80	4.3	ESP	08 Jun, 11:00-11:45 (45 Minute)	1695	314431	46.15	103.40	116.60	

BHILAI STEEL PLANT
April 2023 to September 2023

Mills											
Wire Rod Mill	RHF	70	4.2	-	28 Jun, 10:30-11:30 (60 Minute)	-	-	20.56	-	-	-
Merchant mill	RHF	100	4.2	-	28 Jun, 11:45-12:45 (60 Minute)	-	-	21.92	-	-	-
Rail Mill	RHF	100	4.2	-	27 Jun, 12:05-01:05 (60 Minute)	-	-	21.31	-	-	-
Plate Mill	RHF-J1	100	5.0	-	20 Jun, 12:10-01:10 (60 Minute)	-	-	19.68	-	-	-
Plate Mill	RHF-J2	100	5.0	-	20 Jun, 01:25-02:25 (60 Minute)	-	-	18.93	-	-	-
BRM	RHF	70	5.3	-	12 Jun, 02:40-03:40 (60 Minute)	-	-	17.03	-	-	-
URM	RHF	100	4.2	-	24 Jun, 12:00-01:00 (60 Minute)	-	-	20.28			

Month- July 2023

A.	Stack emission										
Name of the Plant (1)	Stack connecte d to (Name of the unit) (2)	Height of the stack (m) (3)	Diameter of the stack (m) (4)	Pollution Control unit provided (Name) (5)	Date & Time of the monitoring (duration) (6)	Production fig. of the unit, during the period of monitoring (7)	Flow rate of the flue gas (8)	Parameters (whichever are applicable) (9)			
								Particulate matter(PM) (Norm:50mg/ Nm3)	SO ₂ (250mg/N m3)	NO _x (150mg/N m3)	CO (Norm: 1%)

BHILAI STEEL PLANT
April 2023 to September 2023

Blast Furnace											
BF-4 (Process)	Stoves	60	2.5	--do--	11 July, 12:00-01:05 (65 Minute)	1621	116860	21.96	182.00	110.00	0.52% V/V
BF-5 (Process)	Stoves	60	3.5	--do--	11 July, 01:15-02:25 (70 Minute)	1927	110335	19.76	172.60	104.00	0.49% V/V
BF-6 (Process)	Stoves	60	3.5	--do--	24 July, 12:00-01:15 (75 Minute)	1574	115544	17.74	189.00	105.00	0.50% V/V
BF-7 (Process)	Stoves	70	3.5	--do--	21 July, 12:05-01:05 (60 Minute)	3412	104488	28.48	164.00	125.80	0.47% V/V
BF-8) (Process)	Stoves	70	3.5	--do--	15 July, 12:05-01:05 (60 Minute)	7502	170519	21.63	141.48	142.88	0.44% V/V
BF-7 (Space dedusting)				GCP (Scrubber)	31 July, 11:00-11:40 (40 Minute)	-	-	48.96	-	-	-
SMS-2											
LF-1	Ladle Furnace	60	1.65	Bag Filter	06 July, 03:45-04:20 (35 Minute)	1320	112268	48.25	83.00	-	-
LF-2	Ladle Furnace	50	1.5	Bag Filter	01 July, 11:30-12:15 (45 Minute)	1440	107827	40.84	69.40	-	-
SMS-3											
SMS – 3 (DDSY (Secondary))	Liquid Steel	-	-	-	14 July, 11:25-12:00 (35 Minute)	-	-	49.11	-	-	-
A.	Stack emission										
Name of the Plant (1)	Stack connected to (Name of the unit) (2)	Height of the stack (m) (3)	Diameter of the stack (m) (4)	Pollution Control unit provided (Name) (5)	Date & Time of the monitoring (duration) (6)	Production fig. of the unit, during the period of monitoring (7)	Flow rate of the flue gas (8)	Parameters (whichever are applicable) (9)			
								Particulate matter(PM) (Norm:50mg /Nm3)	SO ₂ (Norm: 800mg/ Nm ₃)	NO _x (Norm: 500mg/ Nm3)	CO (Norm: 3 kg/T of Coke
Coke Oven											
Battery No. 1	Battery	100	3.5	Nil	07 July, 10:30-11:30 (60 Minute)	827	119098	43.31	391.25	124.08	2.36Kg/T coke
Battery No. 2	Battery	100	3.5	Nil	07 July, 11:40-12:40	848	119894	45.11	75.98	240.64	2.42Kg/T

BHILAI STEEL PLANT
April 2023 to September 2023

					(60 Minute)						coke
Battery No. 3	Battery	100	3.5	Nil	21 July, 10:45-11:55 (70 Minute)	949	110780	47.53	276.00	120.00	2.40Kg/T coke
Battery No. 5	Battery	100	3.5	Nil	20 July, 02:30-03:30 (60 Minute)	838	121957	45.23	272.00	184.00	2.41Kg/T coke
Battery No. 6	Battery	100	3.5	Nil	20 July, 03:40-04:45 (65 Minute)	838	112576	40.49	225.00	119.00	2.52Kg/T coke
Battery No. 9	Battery	100	3.5	Nil	03 July, 11:10-12:10 (60 Minute)	1508	230346	44.13	258.20	182.32	2.43Kg/T coke
Battery No. 10	Battery	120	4.2	Nil	03 July, 12:30-01:30 (60 Minute)	1528	234683	46.14	120.00	159.40	2.56Kg/T coke
Battery No. 11	Battery	120	4.2	Nil	11 July, 11:30-11:35 (65 Minute)	1809	177773	40.52	268.00	190.50	2.55Kg/T coke
A.	Stack emission										
Name of the Plant (1)	Stack connected to (Name of the unit) (2)	Height of the stack (m) (3)	Diameter of the stack (m) (4)	Pollution Control unit provided (Name) (5)	Date & Time of the monitoring(duration) (6)	Production fig. of the unit, during the period of monitoring (7)	Flow rate of the flue gas (8)	Parameters(whichever are applicable)(9)			
								Particulate matter(PM) (Norm:50mg/Nm 3)	SO ₂ (Norm:60 0mg/Nm 3)	NO _x (Norm: 600mg/Nm 3)	CO
SP-2											
SP-2 (M/c-1)	Sintering Machine	100	6	ESP	12 July, 11:00-11:45 (45 Minute)	1626	207367	43.76	70.50	-	-
SP-2 (M/c-2)	Sintering Machine	100	6	ESP	12 July, 12:00-12:40 (40 Minute)	1626	228968	42.93	67.50	-	-
SP-2 (M/c-3)	Sintering Machine	100	6	ESP	13 July, 10:00-10:35 (35 Minute)	1810	255808	48.87	77.50	-	-
SP-2 (M/c-4)	Sintering Machine	100	6	ESP	13 July, 10:50-10:25 (35 Minute)	1810	253211	46.37	78.00	-	-
SP-3											
SP-3 (M/c-1)	Sintering Machine	120	7	ESP	04 July, 11:30-12:15 (45 Minute)	9010	455206	41.18	-	-	-

BHILAI STEEL PLANT
April 2023 to September 2023

SP-3 (M/c-2)	Sintering Machine	120	7	ESP	05 July, 10:00-10:45 (45 Minute)	10094	467167	45.13	-	-	-
RMP-2											
LK-1	Vertical Kiln	53.2	1.2	Wet Scrubber	13 July, 12:00-12:45 (45 Minute)	235	48574	43.36	62.00	-	-
RK	Rotary Kiln	60	2	Wet Scrubber	06 July, 02:45-03:30 (45 Minute)	81	57517	47.16	45.60		
TPP/CPP											
Boiler 2	Boiler	80	4.3	ESP	24 July, 11:00-11:45 (45 Minute)	2370	109761	43.45	56.50	84.80	-
Boiler 3	Boiler	80	4.3	Wet Scrubber	18 July, 02:00-02:45 (45 Minute)	2056	80581	32.26	62.20	67.45	-
Boiler 4	Boiler	80	4.3	Wet Scrubber	18 July, 03:00-03:45 (45 Minute)	2367	80329	36.87	69.50	86.00	-
Boiler 5	Boiler	80	4.3	ESP	10 July, 11:30-12:15 (45 Minute)	2085	115473	43.46	127.23	131.50	-
Boiler 6	Boiler	80	4.3	ESP	10 July, 10:30-11:15 (45 Minute)	1860	318454	44.90	87.90	112.60	
Mills											
Wire Rod Mill	RHF	70	4.2	-	26 July, 11:00-12:05 (65 Minute)	-	-	18.97	-	-	-
Merchant mill	RHF	100	4.2	-	28 July, 11:00-12:00 (60 Minute)	-	-	20.56	-	-	-
Rail Mill	RHF	100	4.2	-	27 July, 11:30-12:40 (70 Minute)	-	-	19.57	-	-	-
Plate Mill	RHF-J1	100	5.0	-	17 July, 11:30-12:30 (60 Minute)	-	-	18.46	-	-	-
Plate Mill	RHF-J2	100	5.0	-	17 July, 12:40-01:40 (60 Minute)	-	-	19.09	-	-	-
BRM	RHF	70	5.3	-	14 July, 12:15-01:15 (60 Minute)	-	-	18.81	-	-	-
URM	RHF	100	4.2	-	25 July, 11:30-12:30 (60 Minute)	-	-	18.37			

BHILAI STEEL PLANT
April 2023 to September 2023

Month- August 2023

A.	Stack emission										
Name of the Plant (1)	Stack connecte d to (Name of the unit) (2)	Height of the stack (m) (3)	Diameter of the stack (m) (4)	Pollution Control unit provided (Name) (5)	Date & Time of the monitoring (duration) (6)	Production fig. of the unit, during the period of monitoring (7)	Flow rate of the flue gas (8)	Parameters (whichever are applicable) (9)			
								Particulate matter(PM) (Norm:50mg/ Nm3)	SO ₂ (250mg/N m3)	NO _x (150mg/N m3)	CO (Norm: 1%)
Blast Furnace											
BF-4 (Process)	Stoves	60	2.5	--do--	29 Aug, 12:00-01:10 (70 Minute)	2227	109351	19.37	168.00	135.00	0.48% V/V
BF-5 (Process)	Stoves	60	3.5	--do--	19 Aug, 11:50-12:50 (60 Minute)	2004	125352	23.40	240.00	56.90	0.51% V/V
BF-7 (Process)	Stoves	70	3.5	--do--	12 Aug, 12:00-01:00 (60 Minute)	3526	112133	22.71	123.50	80.16	0.45% V/V
BF-8) (Process)	Stoves	70	3.5	--do--	05 Aug, 11:10-12:10 (60 Minute)	6275	172088	17.65	145.56	33.84	0.50% V/V
BF-7 (Space dedusting)				GCP (Scrubber)	31 Aug, 11:15-12:00 (45 Minute)	-	-	49.10	-	-	-
SMS-2											
LF-1	Ladle Furnace	60	1.65	Bag Filter	10 Aug, 11:40-12:20 (40 Minute)	2160	116118	48.70	73.80	-	-
LF-2	Ladle Furnace	50	1.5	Bag Filter	10 Aug, 02:35-03:20 (45 Minute)	1320	111661	37.87	64.80	-	-
SMS-3											
SMS – 3 (DDSY (Secondary))	Liquid Steel	-	-	-	21 Aug, 11:35-12:15 (40 Minute)	-	-	43.00	-	-	-
A.	Stack emission										
Name of the Plant	Stack connected	Height of the	Diameter of the stack	Pollution Control unit	Date & Time of the monitoring	Production fig. of the unit,	Flow rate of the flue	Parameters (whichever are applicable)			

BHILAI STEEL PLANT
April 2023 to September 2023

(1)	to (Name of the unit) (2)	stack (m) (3)	(m) (4)	provided (Name) (5)	(duration) (6)	during the period of monitoring (7)	gas (8)	(9)			
								Particulate matter(PM) (Norm:50mg /Nm3)	SO ₂ (Norm: 800mg/ Nm3)	NO _x (Norm: 500mg/ Nm3)	CO (Norm: 3 kg/T of Coke
Coke Oven											
Battery No. 1	Battery	100	3.5	Nil	28 Aug, 10:55-11:55 (60 Minute)	815	116543	44.88	251.22	155.00	2.41Kg/T coke
Battery No. 2	Battery	100	3.5	Nil	28 Aug, 12:10-01:15 (65 Minute)	871	112131	45.46	191.70	210.56	2.44Kg/T coke
Battery No. 3	Battery	100	3.5	Nil	29 Aug, 10:35-11:35 (60 Minute)	938	120031	41.13	188.64	247.80	2.37Kg/T coke
Battery No. 5	Battery	100	3.5	Nil	03 Aug, 11:15-12:15 (60 Minute)	860	120688	47.01	258.06	200.44	2.50Kg/T coke
Battery No. 6	Battery	100	3.5	Nil	03 Aug, 12:30-01:30 (60 Minute)	836	120521	46.43	249.00	382.00	2.54Kg/T coke
Battery No. 9	Battery	100	3.5	Nil	24 Aug, 03:26-04:31 (65 Minute)	1528	210468	47.59	162.40	178.60	2.49Kg/T coke
Battery No. 10	Battery	120	4.2	Nil	24 Aug, 11:40-12:40 (60 Minute)	1528	225320	38.32	170.30	235.40	2.53Kg/T coke
Battery No. 11	Battery	120	4.2	Nil	09 Aug, 12:05-01:05 (60 Minute)	1809	180013	44.54	125.76	191.76	2.57Kg/T coke
A.	Stack emission										
(1)	Stack connected to (Name of the unit) (2)	Height of the stack (m) (3)	Diameter of the stack (m) (4)	Pollution Control unit provided (Name) (5)	Date & Time of the monitoring(duration) (6)	Production fig. of the unit, during the period of monitoring (7)	Flow rate of the flue gas (8)	Parameters(whichever are applicable)(9)			
								Particulate matter(PM) (Norm:50mg/Nm 3)	SO ₂ (Norm:60 0mg/Nm3)	NO _x (Norm: 600mg/Nm 3)	CO
SP-2											
SP-2 (M/c-1)	Sintering Machine	100	6	ESP	07 Aug, 11:00-11:40 (40 Minute)	1826	215739	47.52	72.80	-	-
SP-2 (M/c-2)	Sintering	100	6	ESP	07 Aug, 11:50-12:30 (40 Minute)	1826	221061	45.60	66.40	-	-

BHILAI STEEL PLANT
April 2023 to September 2023

	Machine										
SP-2 (M/c-3)	Sintering Machine	100	6	ESP	17 Aug, 10:00-10:35 (35 Minute)	2188	237920	40.39	74.80	-	-
SP-2 (M/c-4)	Sintering Machine	100	6	ESP	17 Aug, 10:50-11:25 (35 Minute)	2188	257492	41.36	64.95	-	-
SP-3											
SP-3 (M/c-1)	Sintering Machine	120	7	ESP	04 Aug, 11:00-11:45 (45 Minute)	8690	451399	48.54	-	-	-
SP-3 (M/c-2)	Sintering Machine	120	7	ESP	22 Aug, 11:40-12:20 (40 Minute)	8080	473344	47.07	-	-	-
RMP-2											
LK-1	Vertical Kiln	53.2	1.2	Wet Scrubber	25 Aug, 10:20-11:00 (40 Minute)	222	49360	47.34	53.00	-	-
RK	Rotary Kiln	60	2	Wet Scrubber	01 Aug, 11:00-11:45 (45 Minute)	134	58693	38.90	43.00		
TPP/CPP											
Boiler 2	Boiler	80	4.3	ESP	16 Aug, 10:15-11:00 (45 Minute)	2122	114560	35.29	73.80	110.00	-
Boiler 3	Boiler	80	4.3	Wet Scrubber	02 Aug, 11:30-12:15 (45 Minute)	2083	82357	49.12	65.20	72.60	-
Boiler 4	Boiler	80	4.3	Wet Scrubber	02 Aug, 12:30-01:15 (45 Minute)	2354	79002	48.6	72.00	84.30	-
Boiler 5	Boiler	80	4.3	ESP	14 Aug, 10:20-11:05 (45 Minute)	2144	116059	46.61	130.05	129.35	-
Boiler 6	Boiler	80	4.3	ESP	14 Aug, 11:30-12:15 (45 Minute)	1725	313367	49.16	68.25	116.40	
Mills											
Wire Rod Mill	RHF	70	4.2	-	26 Aug, 10:00-11:05 (65 Minute)	-	-	22.62	-	-	-
Merchant mill	RHF	100	4.2	-	30 Aug, 09:30-10:30 (60 Minute)	-	-	18.89	-	-	-
Rail Mill	RHF	100	4.2	-	30 Aug, 08:00-09:05 (65 Minute)	-	-	20.25	-	-	-
Plate Mill	RHF-J1	100	5.0	-	15 Aug, 09:30-10:30 (60 Minute)	-	-	23.00	-	-	-
Plate Mill	RHF-J2	100	5.0	-	15 Aug, 10:45-11:50 (65 Minute)	-	-	18.30	-	-	-
BRM	RHF	70	5.3	-	26 Aug, 11:20-12:20 (60 Minute)	-	-	24.35	-	-	-
URM	RHF	100	4.2	-	21 Aug, 12:30-01:35 (65 Minute)	-	-	19.39			

Month- September 2023

A.	Stack emission
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BHILAI STEEL PLANT
April 2023 to September 2023

Name of the Plant (1)	Stack connected to (Name of the unit) (2)	Height of the stack (m) (3)	Diameter of the stack (m) (4)	Pollution Control unit provided (Name) (5)	Date & Time of the monitoring (duration) (6)	Production fig. of the unit, during the period of monitoring (7)	Flow rate of the flue gas (8)	Parameters (whichever are applicable) (9)			
								Particulate matter(PM) (Norm:50mg /Nm3)	SO ₂ (Norm: 800mg/ Nm ₃)	NO _x (Norm: 500mg/ Nm3)	CO (Norm: 3 kg/T of Coke)
Coke Oven											
Battery No. 1	Battery	100	3.5	Nil	04 Sep, 10:45-11:45 (60 Minute)	838	121053	48.47	246.50	90.60	2.43Kg/T coke
Battery No. 2	Battery	100	3.5	Nil	04 Sep, 12:55-01:55 (60 Minute)	815	126464	44.30	285.00	91.40	2.48Kg/T coke
Battery No. 3	Battery	100	3.5	Nil	29 Sep, 11:10-12:10 (60 Minute)	838	121770	44.07	176.90	228.30	2.40Kg/T coke
Battery No. 5	Battery	100	3.5	Nil	14 Sep, 10:30-11:30 (60 Minute)	692	126315	42.84	190.00	210.50	2.41Kg/T coke
Battery No. 6	Battery	100	3.5	Nil	14 Sep, 11:40-12:40 (60 Minute)	715	121394	44.74	203.60	219.50	2.60Kg/T coke
Battery No. 9	Battery	100	3.5	Nil	21 Sep, 10:05-11:05 (60 Minute)	1488	217551	46.19	746.70	120.32	2.56Kg/T coke
Battery No. 10	Battery	120	4.2	Nil	21 Sep, 11:15-12:20 (65 Minute)	2010	243180	37.75	539.72	169.20	2.42Kg/T coke
Battery No. 11	Battery	120	4.2	Nil	28 Sep, 11:30-12:30 (60 Minute)	1809	176913	41.90	301.30	174.84	2.49Kg/T coke
A.	Stack emission										
Name of the Plant (1)	Stack connected to (Name of the unit) (2)	Height of the stack (m) (3)	Diameter of the stack (m) (4)	Pollution Control unit provided (Name) (5)	Date & Time of the monitoring(duration) (6)	Production fig. of the unit, during the period of monitoring (7)	Flow rate of the flue gas (8)	Parameters(whichever are applicable)(9)			
								Particulate matter(PM) (Norm:50mg/Nm 3)	SO ₂ (Norm:60 0mg/Nm3)	NO _x (Norm: 600mg/Nm 3)	CO
SP-2											
SP-2 (M/c-1)	Sintering Machine	100	6	ESP	13 Sep, 11:00-11:35 (35 Minute)	2002	259116	46.70	76.40	-	-

BHILAI STEEL PLANT
April 2023 to September 2023

SP-2 (M/c-2)	Sintering Machine	100	6	ESP	13 Sep, 12:00-12:36 (36 Minute)	2002	224993	44.54	71.70	-	-
SP-2 (M/c-3)	Sintering Machine	100	6	ESP	18 Sep, 11:30-12:10 (40 Minute)	2162	240007	43.60	68.25	-	-
SP-2 (M/c-4)	Sintering Machine	100	6	ESP	18 Sep, 12:20-01:00 (40 Minute)	2162	244949	45.01	73.80	-	-
SP-3											
SP-3 (M/c-1)	Sintering Machine	120	7	ESP	08 Sep, 11:05-11:50 (45 Minute)	8565	460612	47.86	-	-	-
SP-3 (M/c-2)	Sintering Machine	120	7	ESP	12 Sep, 11:30-12:15 (45 Minute)	8946	484778	48.89	-	-	-
RMP-2											
LK-1	Vertical Kiln	53.2	1.2	Wet Scrubber	19 Sep, 10:30-11:15 (45 Minute)	140	47468	47.89	67.30	-	-
RK	Rotary Kiln	60	2	Wet Scrubber	01 Sep, 11:00-11:45 (45 Minute)	126	59754	36.68	44.60		
TPP/CPP											
Boiler 1	Boiler	80	4.3	ESP	05 Sep, 11:40-12:25 (45 Minute)	1942	116704	37.48	68.60	112.40	-
Boiler 3	Boiler	80	4.3	Wet Scrubber	02 Sep, 12:45-01:25 (40 Minute)	2017	80745	41.58	63.90	75.20	-
Boiler 4	Boiler	80	4.3	Wet Scrubber	02 Sep, 12:30-01:15 (45 Minute)	2235	81516	38.12	68.50	80.00	-
Boiler 5	Boiler	80	4.3	ESP	16 Sep, 10:30-11:15 (45 Minute)	2121	121077	43.89	88.20	116.80	-
Boiler 6	Boiler	80	4.3	ESP	16 Sep, 11:30-12:15 (45 Minute)	1698	326494	44.87	70.92	128.60	
Mills											
Wire Rod Mill	RHF	70	4.2	-	26 Sep, 11:15-12:20 (65 Minute)	-	-	20.28	-	-	-
Merchant mill	RHF	100	4.2	-	11 Sep, 11:15-12:15 (60 Minute)	-	-	21.68	-	-	-
Rail Mill	RHF	100	4.2	-	05 Sep, 12:15-01:15 (60 Minute)	-	-	20.21	-	-	-
Plate Mill	RHF-J1	100	5.0	-	07 Sep, 11:30-12:35 (65 Minute)	-	-	21.77	-	-	-
Plate Mill	RHF-J2	100	5.0	-	07 Sep, 12:50-01:55 (65 Minute)	-	-	19.33	-	-	-
BRM	RHF	70	5.3	-	22 Sep, 10:00-11:00 (60 Minute)	-	-	19.60	-	-	-
URM	RHF	100	4.2	-	06 Sep, 11:00-12:00 (60 Minute)	-	-	19.88			

BHILAI STEEL PLANT
FUGITIVE EMISSION STATUS April 2023 to September 2023

FLAG E

E-2

Fugitive Emission

April'23 to Sep'23

BHILAI STEEL PLANT

FUGITIVE EMISSION STATUS April 2023 to September 2023

Fugitive Emissions Status Month- April 2023

S. No (1)	Name of the Unit (2)	Location of the Station (distance) (3)	Up wind / Down wind (4)	Date & time of the monitoring (5)	Parameters (as applicable) (6)						
					PM ₁₀ μg/m ³ (4000)	SO ₂ μg/m ³ (200)	NO _x μg/m ³ (150)	Pb* μg/m ³ (2)	CO (5000)	BaP 2000 ng/m ³	Remarks
1	Coke Oven area	In front of Batt.-9		20 Apr -11:30	1840	-	-	-	-	1267* (Batt.1)	Norms as per GSR 277 (E) dtd 30/03/2012
2	Sinter Plant	SP-II (Near M/c-1)		17 Apr -11:00	1830	-	-	-	-	-	-
3	Blast Furnace	BFs-4 Near Furnace		29 Apr -10:30-02:30	964.04	51.00	47.50	0.062*	958	271*	Norms as per GSR 277 (E) dtd 30/03/2012
4	Steel Melting Shop-2	Near LF-1 Chimni		28 Apr -10:00-02:00	978.00	46.40	40.30	0.014*	1194	162*	Norms as per GSR 277 (E) dtd 30/03/2012
5	Thermal Power Plant-1	Near Boiler-4		01 Apr -11:00	1800	-	-	-	-	-	
6	Lime dolomite plant- 1	RMP-1 (Entrance)		22 Apr -11:25	1200	-	-	-	-	-	-
7	Lime dolomite plant-2	RMP-2 (Near welfare building)		22 Apr -10:40	1860	-	-	-	-	-	-

BHILAI STEEL PLANT

FUGITIVE EMISSION STATUS April 2023 to September 2023

Fugitive Emissions Status Month-May 2023

S. No (1)	Name of the Unit (2)	Location of the Station (distance) (3)	Up wind / Down wind (4)	Date & time of the monitoring (5)	Parameters (as applicable) (6)						
					PM ₁₀ μg/m ³ (4000)	SO ₂ μg/m ³ (200)	NO _x μg/m ³ (150)	Pb* μg/m ³ (2)	CO (5000)	BaP 2000 ng/m ³	Remarks
1	Coke Oven area	In front of Batt.-2		04 May -11:00	1790	-	-	-	-	1267* (Batt.1)	Norms as per GSR 277 (E) dtd 30/03/2012
2	Sinter Plant	SP-II (Near M/c-1 & 2)		11 May -10:00	1860	-	-	-	-	-	-
3	Blast Furnace	BFs-6, Near Weighbridge		22 May -10:00-02:00	877.27	59.60	48.50	0.062*	1026	271*	Norms as per GSR 277 (E) dtd 30/03/2012
4	Steel Melting Shop-2	Near LD Converter		23 May -09:30-01:30	963.40	52.00	51.40	0.014*	1194	162*	Norms as per GSR 277 (E) dtd 30/03/2012
5	Thermal Power Plant-1	Near Boiler-5 & 6		01 May -10:40	1780	-	-	-	-	-	
6	Lime dolomite plant- 1	RMP-1 (Entrance)		20 May -10:45	1110	-	-	-	-	-	-
7	Lime dolomite plant-2	RMP-2 (Near welfare building)		20 May -11:25	1860	-	-	-	-	-	-

BHILAI STEEL PLANT

FUGITIVE EMISSION STATUS April 2023 to September 2023

Fugitive Emissions Status Month-June 2023

S. No (1)	Name of the Unit (2)	Location of the Station (distance) (3)	Up wind / Down wind (4)	Date & time of the monitoring (5)	Parameters (as applicable) (6)						
					PM ₁₀ μg/m ³ (4000)	SO ₂ μg/m ³ (200)	NOx μg/m ³ (150)	Pb* μg/m ³ (2)	CO (5000)	BaP 2000 ng/m ³	Remarks
1	Coke Oven area	In front of Batt.-8		02 Jun -08:50	1210	-	-	-	-	1267* (Batt.1)	Norms as per GSR 277 (E) dtd 30/03/2012
2	Sinter Plant	SP-II (Near M/c-3 & 4)		22 Jun -11:40	1530	-	-	-	-		-
3	Blast Furnace	BFs-7, Casting House		15 Jun -10:15-03:15	528	55.10	46.40	0.062*	878	271*	Norms as per GSR 277 (E) dtd 30/03/2012
4	Blast Furnace 8	BFs-8, Casting House		21 Jun -11:10	797	53.87	47.22	-	-		Norms as per GSR 277 (E) dtd 30/03/2012
5	Steel Melting Shop-2	SMS # 2, Near RH Degasser		19 Jun -10:50-03:50	950	57.60	43.51	0.014*	1092	162*	
6	Steel Melting Shop-3	Near Convertor		03 Jun -09:45	871	52.58	42.69	-	-		-
7	Thermal Power Plant-1	Near Boiler-3 & 4		01 Jun -08:45	1150	-	-	-		-	-
8	Lime dolomite plant- 1	RMP-1 (Entrance)		01 Jun -09:30	1110	-	-	-		-	
9	Lime dolomite plant-2	RMP-2 (Near welfare building)		25 Jun -10:30	1160	-	-	-		-	

BHILAI STEEL PLANT

FUGITIVE EMISSION STATUS April 2023 to September 2023

Fugitive Emissions Status Month-July 2023

S. No (1)	Name of the Unit (2)	Location of the Station (distance) (3)	Up wind / Down wind (4)	Date & time of the monitoring (5)	Parameters (as applicable) (6)						
					PM ₁₀ μg/m ³ (4000)	SO ₂ μg/m ³ (200)	NO _x μg/m ³ (150)	Pb* μg/m ³ (2)	CO (5000)	BaP 2000 ng/m ³	Remarks
1	Coke Oven area	In front of Batt.-9		03 July -11:00	1240	-	-	-	-	1267* (Batt.1)	Norms as per GSR 277 (E) dtd 30/03/2012
2	Sinter Plant	SP-II (Near M/c-1 & 2)		12 July -12:15	1260	-	-	-	-		-
3	Blast Furnace	BFs-6, Near Weighbridge		24 July -11:00-03:00	133.75	57.90	54.30	0.062*	945	271*	Norms as per GSR 277 (E) dtd 30/03/2012
4	Blast Furnace 8	BFs-8, PCI Operation		29 July -10:30-11:11	106.04	86.50	141.40	-	-		Norms as per GSR 277 (E) dtd 30/03/2012
5	Steel Melting Shop-2	SMS # 2, C.C.S. (Caster-6)		25 July -10:55-03:00	690.73	53.90	48.70	0.014*	1041	162*	
6	Steel Melting Shop-3	SMS # 3, Tundish Preparation Bay		27 July -12:00-03:30	203.84	56.90	49.60	-	-		-
7	Thermal Power Plant-1	Near Boiler-5 & 6		10 July -11:10	1210	-	-	-		-	-
8	Lime dolomite plant- 1	RMP-1 (Entrance)		06 July -03:45	1100	-	-	-		-	
9	Lime dolomite plant-2	RMP-2 (Near welfare building)		06 July -03:00	1230	-	-	-		-	

BHILAI STEEL PLANT

FUGITIVE EMISSION STATUS April 2023 to September 2023

Fugitive Emissions Status Month-August 2023

S. No (1)	Name of the Unit (2)	Location of the Station (distance) (3)	Up wind / Down wind (4)	Date & time of the monitoring (5)	Parameters (as applicable) (6)						
					PM ₁₀ µg/m ³ (4000)	SO ₂ µg/m ³ (200)	NO _x µg/m ³ (150) (120 for BF-8)	Pb* µg/m ³ (2)	CO (5000)	BaP 2000 ng/m ³	Remarks
1	Coke Oven area	In front of Batt.-5		03 Aug -10:50	1260	-	-	-	-	1267* (Batt.1)	Norms as per GSR 277 (E) dtd 30/03/2012
2	Sinter Plant	SP-II (Near M/c-1 & 2)		07 Aug -10:45	1290	-	-	-	-		-
3	Blast Furnace	BFs-7 (Stock House-Left, Ground Level)		29 Aug - 09:30-01:00	2480.02	54.90	49.70	0.062*	893	271*	Norms as per GSR 277 (E) dtd 30/03/2012
4	Blast Furnace 8	BFs-8 (Cast House)		19 Aug - 11:55-03:45	933.15	-	-	-	-		Norms as per GSR 277 (E) dtd 30/03/2012
5	Steel Melting Shop-2	SMS # 2, C.C.S. (Caster-6)		10 Aug - 10:40-03:40	690.73	53.90	48.70	0.014*	1140	162*	
6	Steel Melting Shop-3	SMS # 3, In front of converter 2 & 3		21 Aug - 11:45-03:15	698.97	-	-	-	-		-
7	RMP-3	RMP # 3, Infront of Control Room		30 Aug - 08:45-12:50	429.84	-	-	-		-	-
8	Thermal Power Plant-1	Near Boiler-3 & 4		02 Aug -11:00	1220	-	-	-		-	
9	Lime dolomite plant- 1	RMP-1 (Entrance)		01 Aug -12:05	1190	-	-	-		-	
10	Lime dolomite plant-2	RMP-2 (Near welfare building)		01 Aug -11:00	1280	-	-				

BHILAI STEEL PLANT

FUGITIVE EMISSION STATUS April 2023 to September 2023

Fugitive Emissions Status Month-September 2023

S. No (1)	Name of the Unit (2)	Location of the Station (distance) (3)	Up wind / Down wind (4)	Date & time of the monitoring (5)	Parameters (as applicable) (6)						
					PM ₁₀ µg/m ³ (4000)	SO ₂ µg/m ³ (200)	NO _x µg/m ³ (150) (120 for BF-8)	Pb* µg/m ³ (2)	CO (5000)	BaP 2000 ng/m ³	Remarks
1	Coke Oven area	In front of Batt.-1		04 Sep -10:00	1220	-	-	-	-	1267* (Batt.1)	Norms as per GSR 277 (E) dtd 30/03/2012
2	Sinter Plant	SP-II (Near M/c-1 & 2)		13 Sep -10:30	1300	-	-	-	-		-
3	Blast Furnace	BFs-7 (Stock House-Left, Ground Level)		08 Sep - 10:55-11:55	721.85	59.70	53.40	0.062*	917	271*	Norms as per GSR 277 (E) dtd 30/03/2012
4	Blast Furnace 8	BFs-8 (Cast House)		05 Sep - 11:15-02:45	792.09	69.70	59.50	-	985		Norms as per GSR 277 (E) dtd 30/03/2012
5	Steel Melting Shop-2	SMS # 2, Converter Shop Back side 38 Meter		28 Sep - 11:10-02:00	1108.72	55.10	49.60	0.014*	1094	162*	
6	Steel Melting Shop-3	SMS # 3, In front of converter 2 & 3		30 Sep - 10:00-02:00	532.88	54.15	45.22	-	1229		-
7	RMP-3	RMP # 3, Infront of Control Room		12 Sep - 11:15-03:20	2165.47	-	-	-		-	-
8	Thermal Power Plant-1	Near Boiler-3 & 4		02 Sep -10:45	1200	-	-	-		-	
9	Lime dolomite plant- 1	RMP-1 (Entrance)		01 Sep -11:00	1100	-	-	-		-	
10	Lime dolomite plant-2	RMP-2 (Near welfare building)		01 Sep -10:15	1300	-	-				

BHILAI STEEL PLANT

FUGITIVE EMISSION STATUS April 2023 to September 2023

FLAG E

E-3

AMBIENT AIR QUALITY

April'23 to Sep'23

Month- April 2023															
B. AMBIENT AIR QUALITY AND FUGUTIVE EMISSION															
a. Ambient Air quality															
S No.	Location of the Station	Up wind / Down wind	Date & time of the monitoring	Parameters (as applicable)											
1	2	3	4	5											
				PM _{2.5}	PM ₁₀	SO ₂	NO ₂	NH ₃	CO	BaP*	O ₃	Pb*	As*	Ni*	C ₆ H ₆ *
		Norms	24 hrs	60	100	80	80	400	2000 (8 hrs)	-	180	1	-	-	-
			Annual	40	60	50	40	100	4000(1 hrs)	1	100	0.5	6	20	5
	Unit	$\mu\text{g}/\text{m}^3$											ng/m^3		
1	Civic Centre			24.28	56.13	14.88	16.18	1.37	242	NT*	46.88	0.025	NT*	2.000	1.41
2	OP-2			22.08	45.74	18.29	18.71	1.39	267	NT*	49.11	0.034	NT*	2.000	1.08
3	Rail Mill			24.13	55.38	21.69	20.66	2.08	398	NT*	50.59	0.040	NT*	4.000	1.12
4	Ispat Bhavan			23.87	52.34	17.84	18.32	1.48	283	NT*	NA**	0.056	NT*	3.000	NA**

Note: if monitoring of CO is done on 8 hourly basis, then Norm is $2000\mu\text{g}/\text{m}^3$. Otherwise, norm is $4000\mu\text{g}/\text{m}^3$, when monitoring of CO is done for 1 hr.

* NT- not Traceable

** Monitoring is done through online Continious Ambient Monitoring system.At Ispat Bhavan, for monitoring of Ozone & Benzene is not done as no analyzers are installed for there parameters.

Month- May 2023															
B. AMBIENT AIR QUALITY AND FUGUTIVE EMISSION															
a. Ambient Air quality															
S No.	Location of the Station	Up wind / Down wind	Date & time of the monitoring	Parameters (as applicable)											
1	2	3	4	5											
				PM _{2.5}	PM ₁₀	SO ₂	NO ₂	NH ₃	CO	BaP*	O ₃	Pb*	As*	Ni*	C ₆ H ₆ *
		Norms	24 hrs	60	100	80	80	400	2000 (8 hrs)	-	180	1	-	-	-
			Annual	40	60	50	40	100	4000(1 hrs)	1	100	0.5	6	20	5
	Unit	$\mu\text{g}/\text{m}^3$											ng/m^3		
1	Civic Centre			20.03	48.59	12.27	16.65	1.28	212	NT*	47.01	0.025	NT	2.000	1.38
2	OP-2			19.84	42.05	15.37	18.63	1.32	233	NT*	48.26	0.034	NT	2.000	1.02
3	Rail Mill			21.63	54.70	19.04	19.11	1.86	341	NT*	51.06	0.040	NT	4.000	1.09
4	Ispat Bhavan			21.97	49.52	16.88	17.59	1.35	250	NT*	NA**	0.056	NT	3.000	NA**

Note: if monitoring of CO is done on 8 hourly basis, then Norm is $2000\mu\text{g}/\text{m}^3$. Otherwise, norm is $4000\mu\text{g}/\text{m}^3$, when monitoring of CO is done for 1 hr.

* NT- not Traceable

** Monitoring is done through online Continious Ambient Monitoring system. At Ispat Bhavan, for monitoring of Ozone & Benzene is not done as no analyzers are installed for there parameters

Month- June 2023															
B. AMBIENT AIR QUALITY AND FUGUTIVE EMISSION															
a. Ambient Air quality															
S No.	Location of the Station	Up wind / Down wind	Date & time of the monitoring	Parameters (as applicable)											
1	2	3	4	5											
				PM _{2.5}	PM ₁₀	SO ₂	NO ₂	NH ₃	CO	BaP*	O ₃	Pb*	As*	Ni*	C ₆ H ₆ *
		Norms	24 hrs	60	100	80	80	400	2000 (8 hrs)	-	180	1	-	-	-
			Annual	40	60	50	40	100	4000(1 hrs)	1	100	0.5	6	20	5
	Unit	$\mu\text{g}/\text{m}^3$											ng/m^3		
1	Civic Centre			19.40	48.10	13.29	15.56	4.13	241	NT*	24.87	0.025	NT*	2.000	1.44
2	OP-2			17.80	31.44	10.41	12.70	3.19	278	NT*	35.61	0.034	NT*	2.000	1.21
3	Rail Mill			16.90	33.75	18.08	12.60	2.27	396	NT*	45.06	0.040	NT*	4.000	1.34
4	Ispat Bhavan			19.71	36.85	17.31	13.16	2.44	285	NT*	NA**	0.056	NT*	3.000	NA**

Note: if monitoring of CO is done on 8 hourly basis, then Norm is $2000\mu\text{g}/\text{m}^3$. Otherwise, norm is $4000\mu\text{g}/\text{m}^3$, when monitoring of CO is done for 1 hr.

* NT- not Traceable

** Monitoring is done through online Continious Ambient Monitoring system.At Ispat Bhavan, for monitoring of Ozone & Benzene is not done as no analyzers are installed for there parameters.

Month-July 2023															
B. AMBIENT AIR QUALITY AND FUGUTIVE EMISSION															
a. Ambient Air quality															
S No.	Location of the Station	Up wind / Down wind	Date & time of the monitoring	Parameters (as applicable)											
1	2	3	4	5											
				PM _{2.5}	PM ₁₀	SO ₂	NO ₂	NH ₃	CO	BaP*	O ₃	Pb*	As*	Ni*	C ₆ H ₆ *
		Norms	24 hrs	60	100	80	80	400	2000 (8 hrs)	-	180	1	-	-	-
			Annual	40	60	50	40	100	4000(1 hrs)	1	100	0.5	6	20	5
	Unit	$\mu\text{g}/\text{m}^3$											ng/m^3		
1	Civic Centre			14.67	39.68	9.17	10.71	3.89	227	NT*	27.02	0.025	NT	2.000	1.31
2	OP-2			16.82	26.38	9.76	10.28	3.36	283	NT*	38.20	0.034	NT	2.000	1.18
3	Rail Mill			15.77	30.14	15.62	11.67	2.82	331	NT*	41.33	0.040	NT	4.000	1.24
4	Ispat Bhavan			18.02	29.51	14.69	12.94	2.31	250	NT*	NA**	0.056	NT	3.000	NA**

Note: if monitoring of CO is done on 8 hourly basis, then Norm is $2000\mu\text{g}/\text{m}^3$. Otherwise, norm is $4000\mu\text{g}/\text{m}^3$, when monitoring of CO is done for 1 hr.

* NT- not Traceable

** Monitoring is done through online Continious Ambient Monitoring system.At Ispat Bhavan, for monitoring of Ozone & Benzene is not done as no analyzers are installed for there parameters.

Month-August 2023															
B. AMBIENT AIR QUALITY AND FUGUTIVE EMISSION															
a. Ambient Air quality															
S No.	Location of the Station	Up wind / Down wind	Date & time of the monitoring	Parameters (as applicable)											
1	2	3	4	5											
				PM _{2.5}	PM ₁₀	SO ₂	NO ₂	NH ₃	CO	BaP*	O ₃	Pb*	As*	Ni*	C ₆ H ₆ *
		Norms	24 hrs	60	100	80	80	400	2000 (8 hrs)	-	180	1	-	-	-
			Annual	40	60	50	40	100	4000(1 hrs)	1	100	0.5	6	20	5
	Unit	$\mu\text{g}/\text{m}^3$											ng/m^3		
1	Civic Centre			12.39	37.93	9.40	11.19	3.16	212	NT*	26.94	0.025	NT	2.000	1.33
2	OP-2			14.80	24.55	10.21	10.64	3.22	257	NT*	36.39	0.034	NT	2.000	1.21
3	Rail Mill			15.17	28.09	14.78	12.77	2.97	328	NT*	38.22	0.040	NT	4.000	1.19
4	Ispat Bhavan			16.89	28.11	16.02	14.12	2.23	244	NT*	NA**	0.056	NT	3.000	NA**

Note: if monitoring of CO is done on 8 hourly basis, then Norm is $2000\mu\text{g}/\text{m}^3$. Otherwise, norm is $4000\mu\text{g}/\text{m}^3$, when monitoring of CO is done for 1 hr.

* NT- not Traceable

** Monitoring is done through online Continious Ambient Monitoring system.At Ispat Bhavan, for monitoring of Ozone & Benzene is not done as no analyzers are installed for there parameters.

Month- September 2023															
B. AMBIENT AIR QUALITY AND FUGUTIVE EMISSION															
a. Ambient Air quality															
S No.	Location of the Station	Up wind / Down wind	Date & time of the monitoring	Parameters (as applicable)											
1	2	3	4	5											
				PM _{2.5}	PM ₁₀	SO ₂	NO ₂	NH ₃	CO	BaP*	O ₃	Pb*	As*	Ni*	C ₆ H ₆ *
		Norms	24 hrs	60	100	80	80	400	2000 (8 hrs)	-	180	1	-	-	-
			Annual	40	60	50	40	100	4000(1 hrs)	1	100	0.5	6	20	5
	Unit	$\mu\text{g}/\text{m}^3$											ng/m^3		
1	Civic Centre			14.39	32.63	12.81	13.50	3.09	243	NT*	25.30	0.025	NT	2.000	1.42
2	OP-2			15.40	23.64	12.09	11.58	3.17	242	NT*	32.51	0.034	NT	2.000	1.26
3	Rail Mill			17.22	26.38	15.93	14.81	2.83	294	NT*	31.09	0.040	NT	4.000	1.08
4	Ispat Bhavan			18.69	25.70	19.74	15.09	2.36	217	NT*	NA**	0.056	NT	3.000	NA**

Note: if monitoring of CO is done on 8 hourly basis, then Norm is $2000\mu\text{g}/\text{m}^3$. Otherwise, norm is $4000\mu\text{g}/\text{m}^3$, when monitoring of CO is done for 1 hr.

* NT- not Traceable

** Monitoring is done through online Continious Ambient Monitoring system.At Ispat Bhavan, for monitoring of Ozone & Benzene is not done as no analyzers are installed for there parameters.

FLAG - F

Water Pollution Status

April'23 to Sep'23

Water consumption / tonne of Steel produced:

Name of the outlets and quantity discharged: Effluent discharged to: (Name of the river / drain / land etc.)

Quantity of the treatment effluent reused / recirculate and for what purpose

FUGITIVE EMISSION STATUS April 2023 to September 2023

Month- April 2023

[illegible]

BHILAI STEEL PLANT

FUGITIVE EMISSION STATUS April 2023 to September 2023

Date & time of the Monitoring	Name of the stream	Name of the production units contributing to the stream	Parameters (mg/l, except pH and temp.)									Remarks
			Temp.	pH	SS	Phenol	Cyanide	BOD	COD	Amm. Nitrogen	O&G	
Norms			-	6.5-8.5	100	1	0.2	30	250	50	10	
03, 10, 17, 24, 8:00 to 12:30, Grab	Stream – A	SMS I & II, Foundry, PP-1, BF, OP-I, RMP-I, ARS and Plate mill	30.48	7.80	34	BDL	BDL	15	42	5.84	1.32	
03, 10, 17, 24, 8:00 to 12:30, Grab	Stream – B	MSDS-I, RTS, T&D, and R&SM	26.68	7.94	49	BDL	BDL	20	56	20.55	2.30	
01, 08, 15, 22, 8:00 to 12:30, Grab	Stream – C	COBPP, SP-II, SP-III, Coke Ovens and Mills	29.75	8.04	28	0.08	0.07	18	49	7.29	1.85	

Status of Sewage Treatment Plant (STP)

Date & time of the Monitoring	Name of the STP	Quantity of the Effluent m3/hr	Parameters (mg/l, except pH and temp.)					Remarks
			Temp.	pH	SS	BOD	COD	
	Norms			6.5 -8.5	100	30	250	
10 Apr, 10:45 AM	30 MLD	1150	28	7.75	19	8	12	
26 Apr, 07:55 AM	Bhilai House (Oxi. Pond)	475	29	8.31	65	27	72	
28 Apr, 12:10 PM	Risali (Oxi. Pond)	700	29	8.40	39	26	59	
07 Apr, 11:00 AM	Works area	390	29	7.44	46	15	42	

BHILAI STEEL PLANT

FUGITIVE EMISSION STATUS April 2023 to September 2023

Date & time of the Monitoring	Name of the stream	Name of the production units contributing to the stream	Parameters (mg/l, except pH and temp.)									Remarks
			Temp.	pH	SS	Phenol	Cyanide	BOD	COD	Amm. Nitrogen	O&G	
Norms			-	6.5-8.5	100	1	0.2	30	250	50	10	
01, 08, 15, 22, 8:00 to 12:30, Grab	Stream – A	SMS I & II, Foundry, PP-1, BF, OP-I, RMP-I, ARS and Plate mill	31.90	7.44	43	BDL	BDL	14	39	8.89	1.25	
01, 08, 15, 22, 8:00 to 12:30, Grab	Stream – B	MSDS-I, RTS, T&D, and R&SM	31.25	7.35	56	BDL	BDL	20	54	24.99	2.30	
06, 13, 20, 27, 8:00 to 12:30, Grab	Stream – C	COBPP, SP-II, SP-III, Coke Ovens and Mills	30.78	7.78	29	0.07	0.07	16	44	4.97	1.58	

Status of Sewage Treatment Plant (STP)

Date & time of the Monitoring	Name of the STP	Quantity of the Effluent m3/hr	Parameters (mg/l, except pH and temp.)					Remarks
			Temp.	pH	SS	BOD	COD	
		Norms		6.5 -8.5	100	30	250	
01 May, 10:10 AM	30 MLD	1150	28	7.01	57	10	15	
26 May, 10:05 AM	Bhilai House (Oxi. Pond)	475	33	8.20	61	25	65	
22 May, 10:20 AM	Risali (Oxi. Pond)	700	33	8.37	73	23	73	
04 May, 09:45 AM	Works area	390	29	7.08	48	16	46	

Month- June 2023

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BHILAI STEEL PLANT

FUGITIVE EMISSION STATUS April 2023 to September 2023

Quality of various effluent streams at the Boundary line of the plant

Date & time of the Monitoring	Name of the stream	Name of the production units contributing to the stream	Parameters (mg/l, except pH and temp.)									Remarks
			Temp.	pH	SS	Phenol	Cyanide	BOD	COD	Amm. Nitrogen	O&G	
Norms			-	6.5-8.5	100	1	0.2	30	250	50	10	
09, 13, 21, 27, 8:00 to 12:30, Grab	Stream – A	SMS I & II, Foundry, PP-1, BF, OP-I, RMP-I, ARS and Plate mill	32.35	7.67	48	BDL	BDL	15	43	5.22	1.41	
09, 13, 21, 27, 8:00 to 12:30, Grab	Stream – B	MSDS-I, RTS, T&D, and R&SM	32.35	8.39	63	BDL	BDL	19	55	17.48	2.36	
09, 13, 17, 24, 8:00 to 12:30, Grab	Stream – C	COBPP, SP-II, SP-III, Coke Ovens and Mills	32.38	7.85	33	0.09	0.09	17	52	5.81	1.42	

Status of Sewage Treatment Plant (STP)

Date & time of the Monitoring	Name of the STP	Quantity of the Effluent m3/hr	Parameters (mg/l, except pH and temp.)					Remarks
			Temp.	pH	SS	BOD	COD	
	Norms			6.5 -8.5	100	30	250	
27 Jun, 10:10 AM	30 MLD	1150	28	7.41	41	10	16	
29 Jun, 03:10 PM	Bhilai House (Oxi. Pond)	475	27	7.86	78	25	71	
13 Jun, 04:05 AM	Risali (Oxi. Pond)	700	34	8.16	70	24	76	
12 Jun, 09:40 AM	Works area	390	34	7.22	51	17	48	

Month- July 2023

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BHILAI STEEL PLANT

FUGITIVE EMISSION STATUS April 2023 to September 2023

Quality of various effluent streams at the Boundary line of the plant

Date & time of the Monitoring	Name of the stream	Name of the production units contributing to the stream	Parameters (mg/l, except pH and temp.)									Remarks
			Temp.	pH	SS	Phenol	Cyanide	BOD	COD	Amm. Nitrogen	O&G	
Norms			-	6.5-8.5	100	1	0.2	30	250	50	10	
03, 10, 17, 24, 8:00 to 12:30, Grab	Stream – A	SMS I & II, Foundry, PP-1, BF, OP-I, RMP-I, ARS and Plate mill	30.35	7.65	45	BDL	BDL	16	48	4.39	1.28	
03, 10, 17, 24, 8:00 to 12:30, Grab	Stream – B	MSDS-I, RTS, T&D, and R&SM	29.30	7.47	48	BDL	BDL	21	57	9.61	2.33	
04, 11, 18, 25, 8:00 to 12:30, Grab	Stream – C	COBPP, SP-II, SP-III, Coke and Ovens Mills	29.55	7.53	27	0.06	0.06	14	43	4.95	1.23	

Status of Sewage Treatment Plant (STP)

Date & time of the Monitoring	Name of the STP	Quantity of the Effluent m3/hr	Parameters (mg/l, except pH and temp.)					Remarks
			Temp.	pH	SS	BOD	COD	
	Norms			6.5 -8.5	100	30	250	
31 July, 03:15 PM	30 MLD	1150	28	7.12	38	12	18	
20 July, 01:10 PM	Bhilai House (Oxi. Pond)	475	25	7.98	76	26	67	
31 July, 04:00 PM	Risali (Oxi. Pond)	700	29	8.44	69	23	70	
26 July, 12:20 PM	Works area	390	29	7.65	43	19	48	

BHILAI STEEL PLANT

FUGITIVE EMISSION STATUS April 2023 to September 2023

Month- August 2023

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BHILAI STEEL PLANT

FUGITIVE EMISSION STATUS April 2023 to September 2023

Quality of various effluent streams at the Boundary line of the plant

Date & time of the Monitoring	Name of the stream	Name of the production units contributing to the stream	Parameters (mg/l, except pH and temp.)									Remarks
			Temp.	pH	SS	Phenol	Cyanide	BOD	COD	Amm. Nitrogen	O&G	
Norms			-	6.5-8.5	100	1	0.2	30	250	50	10	
08, 17, 22, 28, 8:00 to 12:30, Grab	Stream – A	SMS I & II, Foundry, PP-1, BF, OP-I, RMP-I, ARS and Plate mill	30.18	7.72	31	BDL	BDL	17	47	3.85	1.40	
08, 17, 22, 28, 8:00 to 12:30, Grab	Stream – B	MSDS-I, RTS, T&D, and R&SM	29.50	7.86	37	BDL	BDL	20	55	23.88	2.29	
05, 11, 18, 25, 8:00 to 12:30, Grab	Stream – C	COBPP, SP-II, SP-III, Coke Ovens and Mills	28.65	7.45	33	0.08	0.03	16	43	2.39	1.30	

Status of Sewage Treatment Plant (STP)

Date & time of the Monitoring	Name of the STP	Quantity of the Effluent m3/hr	Parameters (mg/l, except pH and temp.)					Remarks
			Temp.	pH	SS	BOD	COD	
	Norms			6.5 -8.5	100	30	250	
17 Aug, 10:07 AM	30 MLD	1150	29	7.20	35	13	20	
21 Aug, 12:30 PM	Bhilai House (Oxi. Pond)	475	27	7.67	74	24	66	
17 Aug, 12:00 PM	Risali (Oxi. Pond)	700	29	8.47	67	28	74	
14 Aug, 09:05 AM	Works area	390	30	7.12	37	20	52	

Month- September 2023

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BHILAI STEEL PLANT

FUGITIVE EMISSION STATUS April 2023 to September 2023

Quality of various effluent streams at the Boundary line of the plant

Date & time of the Monitoring	Name of the stream	Name of the production units contributing to the stream	Parameters (mg/l, except pH and temp.)									Remarks
			Temp.	pH	SS	Phenol	Cyanide	BOD	COD	Amm. Nitrogen	O&G	
Norms			-	6.5-8.5	100	1	0.2	30	250	50	10	
04, 14, 22, 26, 8:00 to 12:30, Grab	Stream – A	SMS I & II, Foundry, PP-1, BF, OP-I, RMP-I, ARS and Plate mill	28.25	7.86	41	<i>BDL</i>	<i>BDL</i>	13	47	3.24	2.28	
04, 14, 22, 26, 8:00 to 12:30, Grab	Stream – B	MSDS-I, RTS, T&D, and R&SM	28.08	7.75	60	<i>BDL</i>	<i>BDL</i>	17	55	17.09	4.45	
01, 08, 15, 22, 8:00 to 12:30, Grab	Stream – C	COBPP, SP-II, SP-III, Coke and Ovens and Mills	28.08	7.56	29	0.08	0.04	14	47	5.38	1.36	

Status of Sewage Treatment Plant (STP)

Date & time of the Monitoring	Name of the STP	Quantity of the Effluent m3/hr	Parameters (mg/l, except pH and temp.)					Remarks
			Temp.	pH	SS	BOD	COD	
	Norms			6.5 -8.5	100	30	250	
22 Sep, 12:00 PM	30 MLD	1150	28	7.86	48	25	86	
26 Sep, 04:33 PM	Bhilai House (Oxi. Pond)	475	27	8.40	76	23	61	
26 Sep, 04:12 PM	Risali (Oxi. Pond)	700	27	7.87	68	25	71	
05 Sep, 09:40 AM	Works area	390	25	7.71	42	15	45	

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Noise Pollution Control Status

April'23 to Sep'23

Noise Pollution Control Status

Month-April 2023

1. Noise Monitoring in Work Zone

Location	Date of Monitoring	Distance from the source	Name of control equipment provided	Noise Level Leq dB(A)	Duration of the monitoring (time)	Remarks
Oxygen plant-2 (Control Room)	29-Apr	5 m	Air tight control Room	67.4	2 Minute	
Blast Furnace-4(Control Room)	10-Apr	5 m	Acoustic Room	68.4	2 Minute	
Mills (Rolling / forgoing) Rail Mill	29-Apr	5 m	Acoustic pulpit	88.4	2 Minute	
TPP/CPP (Turbines-4) (Control Room)	01-Apr	5 m	Acoustic cabins	68.4	2 Minute	
SP-2, (M/c-1 & 2) Operator's room	17-Apr	5 m	Acoustic Room	67.4	2 Minute	
Coke-oven area (Batt.-1) (Control Room)	05-Apr	5 m	Air Tight control Room	66.8	2 Minute	
Others						

* Noise level map of the plant may be attached along with the report

Bhilai Steel Plant Noise Pollution Status April 2023 to September 2023

2. Ambient Noise Monitoring

Noise Zone	Noise Level			Unit: dB (A)	
	Standard	Day Time	Night time		
Industrial Area (at boundary of plant)					
Industrial Area (at boundary of plant)					
Near OP-2	75	53.4	51.8		
Near Joratarai Gate	75	54.6	52.3		
Near Main Gate	75	56.3	52.9		
Near Khursipar Gate	75	67.3	65.7		
Commercial Area					
Sector-05 (Market area)	65 Day & 55 Night	60.6	53.2		
Sector-06 (Near 'B' Market)	65 Day & 55 Night	53.6	52.0		
Sector-09 (Goal Market)	65 Day & 55 Night	57.6	54.0		
Maroda Sector (BSP Market)	65 Day & 55 Night	56.3	53.0		
Risali Sector (BSP Market)	65 Day & 55 Night	63.9	54.9		
Residential Area					
Sector-01 (Street No. - 23)	55 Day & 45 Night	42.5	44.3		
Sector-05 (Street No. - 32)	55 Day & 45 Night	45.0	43.8		
Sector-07 (Street No. - 17)	55 Day & 45 Night	49.6	44.0		
Sector-08 (Street No. - 05)	55 Day & 45 Night	48.6	44.2		
Sector-10 (Street No. - 25)	55 Day & 45 Night	47.8	44.8		
Silence Area					
Sector-02 (English Medium Middle School)	50 Day & 40 Night	48.0	38.2		
Sector-05 (Girls Higher Secondry School)	50 Day & 40 Night	46.2	37.5		
Sector-07 (English Medium Middle School)	50 Day & 40 Night	47.9	38.0		
Risali Sector (Aadarsh Hindi Medium Middle School)	50 Day & 40 Night	47.8	39.2		
Maroda Sector (Estate Court)	50 Day & 40 Night	45.9	38.9		

Noise Monitoring in township area done (Quarterly) in the month of March-23

Bhilai Steel Plant Noise Pollution Status April 2023 to September 2023

Month- May 2023

1. Noise Monitoring in Work Zone

Location	Date of Monitoring	Distance from the source	Name of control equipment provided	Noise Level Leq dB(A)	Duration of the monitoring (time)	Remarks
Oxygen plant-2 (Control Room)	24-May	5 m	Air tight control Room	65.4	2 Minute	
Blast Furnace-7(Control Room)	06-May	5 m	Acoustic Room	68.6	2 Minute	
Mills (Rolling / forgoing) Rail Mill	19-May	5 m	Acoustic pulpit	87.3	2 Minute	
TPP/CPP (Turbines-5) (Control Room)	01-May	5 m	Acoustic cabins	64.9	2 Minute	
SP-2, (M/c-1 & 2) Operator's room	11-May	5 m	Acoustic Room	65.3	2 Minute	
Coke-oven area (Batt.-1 & 2) (Control Room)	04-May	5 m	Air Tight control Room	67.4	2 Minute	
Others						

Bhilai Steel Plant Noise Pollution Status April 2023 to September 2023

2. Ambient Noise Monitoring

Noise Zone	Noise Level	Unit: dB (A)	
	Standard	Day Time	Night time
Industrial Area (at boundary of plant)			
Industrial Area (at boundary of plant)			
Near OP-2	75	53.4	51.8
Near Joratarai Gate	75	54.6	52.3
Near Main Gate	75	56.3	52.9
Near Khursipar Gate	75	67.3	65.7
Commercial Area			
Sector-05 (Market area)	65 Day & 55 Night	60.6	53.2
Sector-06 (Near 'B' Market)	65 Day & 55 Night	53.6	52.0
Sector-09 (Goal Market)	65 Day & 55 Night	57.6	54.0
Maroda Sector (BSP Market)	65 Day & 55 Night	56.3	53.0
Risali Sector (BSP Market)	65 Day & 55 Night	63.9	54.9
Residential Area			
Sector-01 (Street No. - 23)	55 Day & 45 Night	42.5	44.3
Sector-05 (Street No. - 32)	55 Day & 45 Night	45.0	43.8
Sector-07 (Street No. - 17)	55 Day & 45 Night	49.6	44.0
Sector-08 (Street No. - 05)	55 Day & 45 Night	48.6	44.2
Sector-10 (Street No. - 25)	55 Day & 45 Night	47.8	44.8
Silence Area			
Sector-02 (English Medium Middle School)	50 Day & 40 Night	48.0	38.2
Sector-05 (Girls Higher Secondry School)	50 Day & 40 Night	46.2	37.5
Sector-07 (English Medium Middle School)	50 Day & 40 Night	47.9	38.0
Risali Sector (Aadarsh Hindi Medium Middle School)	50 Day & 40 Night	47.8	39.2
Maroda Sector (Estate Court)	50 Day & 40 Night	45.9	38.9

Noise Monitoring in township area done (Quarterly) in the month of March-23

Bhilai Steel Plant Noise Pollution Status April 2023 to September 2023

Month- June 2023

1. Noise Monitoring in Work Zone

Location	Date of Monitoring	Distance from the source	Name of control equipment provided	Noise Level Leq dB(A)	Duration of the monitoring (time)	Remarks
Oxygen plant-2 (Control Room)	28-Jun	5 m	Air tight control Room	65.3	2 Minute	
Blast Furnace-7(Control Room)	09-Jun	5 m	Acoustic Room	65.3	2 Minute	
Mills (Rolling / forgoing) Rail Mill	27-Jun	5 m	Acoustic pulpit	87.8	2 Minute	
TPP/CPP (Turbines-4) (Control Room)	07-Jun	5 m	Acoustic cabins	67.4	2 Minute	
SP-2, (M/c-1 & 2) Operator's room	12-Jun	5 m	Acoustic Room	64.5	2 Minute	
Coke-oven area (Batt.-5 & 6) (Control Room)	02-Jun	5 m	Air Tight control Room	66.0	2 Minute	
Oxygen plant-2 (Control Room)	28-Jun	5 m	Air tight control Room	65.3	2 Minute	
Others						

* Noise level map of the plant may be attached along with the report

Bhilai Steel Plant Noise Pollution Status April 2023 to September 2023

2. Ambient Noise Monitoring

Noise Zone	Noise Level		
	Standard	Day Time	Night time
Unit: dB (A)			
Industrial Area (at boundary of plant)			
Near OP-2	75	57.2	54.1
Near Joratarai Gate	75	58.5	54.0
Near Main Gate	75	60.0	52.0
Near Khursipar Gate	75	56.9	52.3
Commercial Area			
Sector-05 (Market area)	65 Day & 55 Night	52.3	45.8
Sector-06 (Near 'B' Market)	65 Day & 55 Night	60.0	52.2
Sector-09 (Goal Market)	65 Day & 55 Night	52.9	48.0
Maroda Sector (BSP Market)	65 Day & 55 Night	54.1	51.0
Risali Sector (BSP Market)	65 Day & 55 Night	63.1	50.9
Residential Area			
Sector-01 (Street No. - 23)	55 Day & 45 Night	49.0	44.3
Sector-05 (Street No. - 32)	55 Day & 45 Night	50.0	44.1
Sector-07 (Street No. - 17)	55 Day & 45 Night	49.0	43.9
Sector-08 (Street No. - 05)	55 Day & 45 Night	50.0	43.5
Sector-10 (Street No. - 25)	55 Day & 45 Night	49.0	44.6
Silence Area			
Sector-02 (English Medium Middle School)	50 Day & 40 Night	49.1	38.7
Sector-05 (Girls Higher Secondary School)	50 Day & 40 Night	47.1	39.2
Sector-07 (English Medium Middle School)	50 Day & 40 Night	46.8	39.0
Risali Sector (Aadarsh Hindi Medium Middle School)	50 Day & 40 Night	48.2	39.4
Maroda Sector (Estate Court)	50 Day & 40 Night	47.0	38.9

Noise Monitoring in township area done (Quarterly) in the month of June-23

Bhilai Steel Plant Noise Pollution Status April 2023 to September 2023

Month - July 2023

1. Noise Monitoring in Work Zone

Location	Date of Monitoring	Distance from the source	Name of control equipment provided	Noise Level Leq dB(A) 90 dB (A) for 8 hrs. exposure (As per Factory Act, 1948)	Duration of the monitoring (time)	Remarks
Oxygen plant-2 (Control Room)	28-Jul	5 m	Air tight control Room	65.7	2 Minute	
Blast Furnace-4 & 5(Control Room)	11-Jul	5 m	Acoustic Room	70.4	2 Minute	
Mills (Rolling / forgoing) Rail Mill	28-Jul	5 m	Acoustic pulpit	86.9	2 Minute	
TPP/CPP (Turbines-5) (Control Room)	10-Jul	5 m	Acoustic cabins	64.8	2 Minute	
SP-2, (M/c-1 & 2) Operator's room	12-Jul	5 m	Acoustic Room	66.4	2 Minute	
Coke-oven area (Batt.-9) (Control Room)	03-Jul	5 m	Air Tight control Room	70.1	2 Minute	
Oxygen plant-2 (Control Room)	28-Jul	5 m	Air tight control Room	65.7	2 Minute	
Others						

* Noise level map of the plant may be attached along with the report

Bhilai Steel Plant Noise Pollution Status April 2023 to September 2023

2. Ambient Noise Monitoring

Noise Zone	Noise Level			Unit: dB (A)
	Standard	Day Time	Night time	
Industrial Area (at boundary of plant)				
Near OP-2	75	57.2	54.1	
Near Joratarai Gate	75	58.5	54.0	
Near Main Gate	75	60.0	52.0	
Near Khursipar Gate	75	56.9	52.3	
Commercial Area				
Sector-05 (Market area)	65 Day & 55 Night	52.3	45.8	
Sector-06 (Near 'B' Market)	65 Day & 55 Night	60.0	52.2	
Sector-09 (Goal Market)	65 Day & 55 Night	52.9	48.0	
Maroda Sector (BSP Market)	65 Day & 55 Night	54.1	51.0	
Risali Sector (BSP Market)	65 Day & 55 Night	63.1	50.9	
Residential Area				
Sector-01 (Street No. - 23)	55 Day & 45 Night	49.0	44.3	
Sector-05 (Street No. - 32)	55 Day & 45 Night	50.0	44.1	
Sector-07 (Street No. - 17)	55 Day & 45 Night	49.0	43.9	
Sector-08 (Street No. - 05)	55 Day & 45 Night	50.0	43.5	
Sector-10 (Street No. - 25)	55 Day & 45 Night	49.0	44.6	
Silence Area				
Sector-02 (English Medium Middle School)	50 Day & 40 Night	49.1	38.7	
Sector-05 (Girls Higher Secondary School)	50 Day & 40 Night	47.1	39.2	
Sector-07 (English Medium Middle School)	50 Day & 40 Night	46.8	39.0	
Risali Sector (Aadarsh Hindi Medium Middle School)	50 Day & 40 Night	48.2	39.4	
Maroda Sector (Estate Court)	50 Day & 40 Night	47.0	38.9	

Noise Monitoring in township area done (Quarterly) in the month of June-23

Bhilai Steel Plant Noise Pollution Status April 2023 to September 2023

Month - August 2023

1. Noise Monitoring in Work Zone

Location	Date of Monitoring	Distance from the source	Name of control equipment provided	Noise Level Leq dB(A) 90 dB (A) for 8 hrs. exposure (As per Factory Act, 1948)	Duration of the monitoring (time)	Remarks
Oxygen plant-2 (Control Room)	30-Aug	5 m	Air tight control Room	65.3	2 Minute	
Blast Furnace- 5(Control Room)	05-Aug	5 m	Acoustic Room	68.9	2 Minute	
Mills (Rolling / forgoing) Rail Mill	30-Aug	5 m	Acoustic pulpit	87.8	2 Minute	
TPP/CPP (Turbines-4) (Control Room)	02-Aug	5 m	Acoustic cabins	66.8	2 Minute	
SP-2, (M/c-1 & 2) Operator's room	07-Aug	5 m	Acoustic Room	65.0	2 Minute	
Coke-oven area (Batt.-5 & 6) (Control Room)	03-Aug	5 m	Air Tight control Room	69.7	2 Minute	
Oxygen plant-2 (Control Room)	30-Aug	5 m	Air tight control Room	65.3	2 Minute	
Others						

* Noise level map of the plant may be attached along with the report

Bhilai Steel Plant Noise Pollution Status April 2023 to September 2023

2. Ambient Noise Monitoring

Noise Zone	Noise Level Unit: dB (A)		
	Standard	Day Time	Night time
Industrial Area (at boundary of plant)			
Near OP-2	75	57.2	54.1
Near Joratarai Gate	75	58.5	54.0
Near Main Gate	75	60.0	52.0
Near Khursipar Gate	75	56.9	52.3
Commercial Area			
Sector-05 (Market area)	65 Day & 55 Night	52.3	45.8
Sector-06 (Near 'B' Market)	65 Day & 55 Night	60.0	52.2
Sector-09 (Goal Market)	65 Day & 55 Night	52.9	48.0
Maroda Sector (BSP Market)	65 Day & 55 Night	54.1	51.0
Risali Sector (BSP Market)	65 Day & 55 Night	63.1	50.9
Residential Area			
Sector-01 (Street No. - 23)	55 Day & 45 Night	49.0	44.3
Sector-05 (Street No. - 32)	55 Day & 45 Night	50.0	44.1
Sector-07 (Street No. - 17)	55 Day & 45 Night	49.0	43.9
Sector-08 (Street No. - 05)	55 Day & 45 Night	50.0	43.5
Sector-10 (Street No. - 25)	55 Day & 45 Night	49.0	44.6
Silence Area			
Sector-02 (English Medium Middle School)	50 Day & 40 Night	49.1	38.7
Sector-05 (Girls Higher Secondary School)	50 Day & 40 Night	47.1	39.2
Sector-07 (English Medium Middle School)	50 Day & 40 Night	46.8	39.0
Risali Sector (Aadarsh Hindi Medium Middle School)	50 Day & 40 Night	48.2	39.4
Maroda Sector (Estate Court)	50 Day & 40 Night	47.0	38.9

Noise Monitoring in township area done (Quarterly) in the month of June-23

Bhilai Steel Plant Noise Pollution Status April 2023 to September 2023

Month - September 2023

1. Noise Monitoring in Work Zone

Location	Date of Monitoring	Distance from the source	Name of control equipment provided	Noise Level Leq dB(A) 90 dB (A) for 8 hrs. exposure (As per Factory Act, 1948)	Duration of the monitoring (time)	Remarks
Oxygen plant-2 (Control Room)	30-Sep	5 m	Air tight control Room	67.3	2 Minute	
Blast Furnace- 7(Control Room)	19-Sep	5 m	Acoustic Room	66.4	2 Minute	
Mills (Rolling / forgoing) Rail Mill	06-Sep	5 m	Acoustic pulpit	84.3	2 Minute	
TPP/CPP (Turbines-4) (Control Room)	02-Sep	5 m	Acoustic cabins	68.7	2 Minute	
SP-2, (M/c-1 & 2) Operator's room	13-Sep	5 m	Acoustic Room	67.5	2 Minute	
Coke-oven area (Batt.-1 & 2) (Control Room)	04-Sep	5 m	Air Tight control Room	68.9	2 Minute	
Others						

* Noise level map of the plant may be attached along with the report

Bhilai Steel Plant Noise Pollution Status April 2023 to September 2023

2. Ambient Noise Monitoring

Noise Zone	Noise Level Unit: dB (A)		
	Standard	Day Time	Night time
Industrial Area (at boundary of plant)			
Near OP-2	75	53.8	52.7
Near Joratarai Gate	75	54.6	51.9
Near Main Gate	75	53.4	51.3
Near Khursipar Gate	75	67.3	65.8
Commercial Area			
Sector-05 (Market area)	65 Day & 55 Night	62.8	51.3
Sector-06 (Near 'B' Market)	65 Day & 55 Night	64.0	52.0
Sector-09 (Goal Market)	65 Day & 55 Night	53.4	53.0
Maroda Sector (BSP Market)	65 Day & 55 Night	50.8	50.2
Risali Sector (BSP Market)	65 Day & 55 Night	55.7	54.5
Residential Area			
Sector-01 (Street No. - 23)	55 Day & 45 Night	48.8	42.0
Sector-05 (Street No. - 32)	55 Day & 45 Night	52.0	39.2
Sector-07 (Street No. - 17)	55 Day & 45 Night	47.3	41.4
Sector-08 (Street No. - 05)	55 Day & 45 Night	51.2	43.0
Sector-10 (Street No. - 25)	55 Day & 45 Night	47.9	40.5
Silence Area			
Sector-02 (English Medium Middle School)	50 Day & 40 Night	48.2	38.0
Sector-05 (Girls Higher Secondary School)	50 Day & 40 Night	46.4	38.7
Sector-07 (English Medium Middle School)	50 Day & 40 Night	46.3	38.2
Risali Sector (Aadarsh Hindi Medium Middle School)	50 Day & 40 Night	47.0	39.0
Maroda Sector (Estate Court)	50 Day & 40 Night	48.1	36.0

Noise Monitoring in township area done (Quarterly) in the month of September-23

Flag-H

Environmental Projects Implemented at BSP

Let's commit to Clean & Green Bhilai

S.No.	Projects	Status (As on 30 th Sep. 2023)
1.	Water recycling schemes for Plant Outlet-B Cost : 3.91 Crs	Completed.
2.	Water recycling schemes for Plant outlet-C Cost : 44.8 Crs	Completed
3.	To de-link the HUDCO sewerage line from sewerage network of Bhilai Township & divert house & laying of 2.5 KM sewer line.	BSP requested CECB to delist this project from the list of BG project earlier submitted by BSP.
4.	Construction of Secured Land Fill for disposal of hazardous waste. Cost : 12.4 Crs	Completed.
5.	Replacement of Multi-cyclones (wet scrubbers) by ESPs at Sinter Plant-II for control of Stack emission. Cost : 43.91 Crs	Completed.
6.	ESP based de-dusting system at SP-II for work-zone/fugitive emission control. Cost : 2.987Crs	Completed.
7.	Up-gradation of waste gas ESP of SP-III for control of Stack emission. Cost : 6.24 Crs	
8.	Cast house De-fuming system in Blast Furnace-7 for control of work-zone emissions in cast house. Cost : 12.67 Crs	Completed.

9.	Replacement of wet scrubbers with Bag-filters at RMP-II for control of Stack emissions. Cost : 3.95 Crs	Work in Progress.
10.	Installation of secondary Emission control system/Dog-House for three Convertors at Steel melting Shop-II . Cost : 411.89 Crs	• Decremental price bid open on 01/06/2023. • L1 party is M/s Mecon Consortium.

MONITORING REPORT DATA SHEET

1	Project Type: River-valley/Mining/ Industry/ Thermal/Nuclear/Others (specify)	Industry – Integrated Iron & Steel Plant
2	Name of the project	Revised Configuration of Modernization-cum-expansion of 7.0 MTPA Bhilai Steel Plant
3	Clearance (s) OM No. and Date	F No. J-11011/28/2007-IAII(I) dtd 24 th May 2019
4	Location	
	a) District (s)	Durg
	b) State (s)	Chhattisgarh
	c) Location Latitude/longitude	Latitude.: 21 ⁰ 11 ^I to 21 ⁰ 13 ^I Longitude – 81 ⁰ 22 ^I to 81 ⁰ 24 ^I
5	Address for correspondence	
	a) Address of the concerned Project Chief Engineer (with Pin code & Telephone/ Telex/ Fax Number	Shri S.Mukhopadhyay ED (Project) Bhilai Steel Plant, Bhilai – 490001 Phone – 0788 – 2852100
	b) Address of the concerned Project Chief Engineer (with Pin code & Telephone/ Telex/ Fax Number	Mr.D.L.Moitra Chief General Manager (Environment) Bhilai Steel Plant, Bhilai – 490001 Phone – 0788 – 2860582 (M-9407981619)
6	Salient Features	
	a) Of the project	The summary of Revised Configuration of Modernization-cum-expansion of 7.0 MTPA Bhilai Steel Plant is given at annexure-1. The complete details are given in EIA & EMP Report already submitted to MoEFCC.
	b) Of the Environment Management Plans	The Environment Management Programs/Plans have already been completed. However, further actions for environment Management are provided in the attached compliance report against the conditions of EC.
7	Break up of the Project Area	
	a) Submergence area : Forest & Non-forest	Nil
	b) Others	The proposed Revised Configuration of Modernization-cum-expansion of 7.0 MTPA Bhilai Steel Plant was undertaken within the 6286.75 Hectares under its possession. No additional land was acquired for expansion projects.
8	Breakup of the Project affected population with enumeration of those losing Houses/ Dwelling units only.	

	Agricultural land only, both dwelling units & agricultural land & landless labourers/ Artisans	
	a) SC, ST/Adivasi	NA
	b) Others (Please indicate whether these figures are based on any specific and systematic survey carried out or only provisional figures, if a survey is carried out give details & year of survey)	NA
9	Financial details	
	a) Project cost as originally planned and subsequent revised estimates and the year of price reference	Rs. 273 Crores , Year : 2019
	b) Allocation mode for environmental management plans with item wise and year wise break-up	Proposed environment management programs under modernization / expansion of Already completed against the earlier EC granted to BSP vide EC no. F No. J-11011/28/2007-IAII(I) Dtd 31.03.2018 However, further actions for environment Management are provided in the attached compliance report against the conditions of EC
	c) Benefit cost ratio/Internal rate of Return and the year of assessment	NA Note: The Modernization /expansion of the plant already completed
	d) Whether(c) includes the cost of Environment Management as shown in the above.	NA Note: The Modernization /expansion of the plant already completed
	e) Actual expenditure incurred on the project so far	11 Crores
	f) Actual expenditure incurred on the Environment Management	NA Note: The proposed environment management programs under Modernization /expansion of the plant already completed against the earlier EC granted to BSP vide EC no. F No. J-11011/28/2007-IAII(I) Dtd 31.03.2018 However, further actions for environment Management are provided in the attached compliance report against the conditions of EC
10	Forest land requirement	
	a) The status of approval for diversion of forest land for non-forestry use	The expansion project is taking place within the existing project area. No additional land is acquired.
	b) The status of clearing felling	NA

	c) The status of compensatory afforestation, if any Comments on the viability & sustainability of compensatory afforestation program in the light of actual field experience so far	NA
11	The status of clear felling in non-forest area (such as submergence area of reservoir, approach roads), if any with quantitative information information required	NA
12	Status of Construction (Actual and or planned)	-Given at Annexure-1
	a) Date of commencement (Actual and or planned)	11/07/2009 (Earlier 7.0 MT Plant)
	b) Date of completion (Actual and or planned)	
13	Reason for the delay if the project is yet to start	NA

Annexure-1

Revised Configuration of BSP's 7.0 MT MODEX.

Units already completed under EC no F No. J-11011/28/2007-IAII(I) dtd 31/03/2008.

Sl. No.	Major Packages	Status
1	Coke Oven Complex	Completed
2	Sinter Plant Complex	Completed
3	Blast Furnace Complex	Completed
4	SMS-I	-
5	SMS-II	Completed
6	SMS-III	Completed
7	BBM	-
8	Plate Mill	Completed
9	RSM	Completed
10	Merchant Mill	Completed
11	Bar Rod Mill	Completed
12	Universal Beam Mill	Dropped/Not coming
13	Wire Rods	Completed
14	Lime & Dolo Plants	Completed
15	Oxygen Plant	Completed
16	Power & Blowing Station	Completed

Changes in the revised configuration for which EC was granted by MoEFCC vide EC No.

F No. J-11011/28/2007-IAII(I) dtd 24/05/2019.

- a) **CO & CCD:** Nine Batteries can be operated out of 11 installed batteries and any 2 batteries will be non-operational (under cold repair/rebuilding) -- earlier, at a time, 8 batteries operations were permitted and 3 batteries were required to be kept under cold repair/rebuilding.

- b) **Operation of BF-1** for three more years is permitted till sequential capital repairs of BF-4,5,6 i.e up to 24/05/2025 vide amendment issued by MoEFCC dtd 28/04/2022
- c) **Operation of RMP-1** for three more years is permitted i.e up to 24/05/2025 vide amendment issued by MoEFCC dtd 28/04/2022
Note: BF-1 &2, SMS-1, & BBM have been phased-out as per the EC granted in May-2019
- d) **Sinter complex** : Production capacity – 9.772 MTPA - Earlier it was 9.235 MTPA

Additional investment of 273 crores was proposed for the following changes in the Existing Unit in the revised configuration:

S.no	Proposed Change in the existing units	Status
1	SMS-3 :Modification of 1x3 strand Beam Blank Caster into 1x3 strand Bloom-cum-Beam blank Caster of same capacity	Work awarded on 23/07/2021 . Likely completion by November'2023.
2	SMS-3: Installation of 3x160t Argon Rinsing Unit (ARU)	Completed
3	Plate Mill: New Quenching & Tampering facility in Plate Mill.	Work to commence

Annexure-II

Sub: Revised Configuration of Modernization & Expansion of 7 MTPA Bhilai Steel Plant, SAIL---- Six Monthly Compliance Report.

	A. Specific conditions:	
i.	Safety mock drill for gas pipeline maintenance shall be conducted every six months and reported to Regional Office of MoEF&CC. Project proponent shall arrange to provide training to employees on 'behavioural safety'.	• Safety mock drill for gas pipeline maintenance are being conducted every six months (Report enclosed at Flag-A) • Training to employees on 'behavioural safety' is being organized regularly (Report enclosed at Flag-B)
ii.	All CER activities as committed in the reply to the ADS letter dated 02.01.2019 shall be completed in financial year 2019-20.	• BSP has initiated action for completion of all identified CER activities/projects committed in the reply to the ADS letter dated 02.01.2019. • Due to the prevalence of COVID pandemic (1st wave from March to November-2020 and 2nd wave from March to June-2021) there has been delay in completion of the projects. • However, presently the CER projects are progressing well & likely to be completed by March-2024. • A detailed status report on CER activities enclosed at Flag-C
iii.	100 % SMS -Slag utilisation shall be ensured after conditioning /steam curing.	• About 55% the BOF slag is presently being recycled back in to steel making process and also utilized in Road Making & filling of the low lying areas. • BSP has also started selling BOF slag to the interested buyers (Cement Plants & other Construction industries) since April-2021. • A pilot scale study on "Development of process for steam maturing of BOF slag" at BSL was taken up by SAIL. The matured BOF slag can be utilised as an

		aggregate in cement concrete, as rail track ballast and for road making etc. SAIL came out with the final report, wherein optimum process parameters have been frozen. The proposition for steam maturing facility on commercial scale is under consideration. • Number of other R&D efforts are being taken-up by SAIL in association with other agencies, which are still in nascent stage. After the completion of these studies, exploring the options for commercial scale/bulk utilization of BOF slag will be taken-up. • BSP has given an assignment to NIT-Raipur for “Assessing the suitability of Twin Hearth Furnace(THF)/Steel Slag as pavement material and feasibility of THF/Steel slag in construction of the rural roads. NIT Raipur has submitted the final report in June-2021.The report was submitted to CECB and will be shared with all agencies involved in road making to promote the use of steel slag in Road making and other infrastructure projects.
iv.	Scheme for decommissioning of SMS-1 and its utilities along with green belt development in that area shall be submitted within six months to the Ministry and Regional Office of the MoEF&CC.	• SMS-1 phased-out in March-2021 Decommissioning plan along with greenbelt development will be submitted to MoEF&CC.
v.	Scheme for green belt development in the remaining area for covering 33% of total project area shall be submitted to the Regional office of the MoEF&CC.	• BSP has planted 4540942 nos of trees in an area covering about 1885 hectares till Sep.-2023. • In the year 2023-24 BSP has been planted 25942Trees. 25650 saplings planted at Township and its surrounding area of Bhilai. Work awarded to C.G. Van Vikas Nigam. • In the year 2022-23(April-March), BSP has planted 21210 trees within the plant premises & township covering an area of about 20-25 hectares.

		• Further Green belt required to be developed to meet the 33% criteria is about <u>280 Hectares</u> . • However by excluding the two reservoirs/cooling ponds area of 1100 hectares from the total area of the project, BSP's green belt coverage comes to 36.34 %.
vi.	Standard Operating Procedures (SOPs) shall be developed for performance monitoring of pollution control devices and performance monitoring should get conducted every year internally and every third year through accredited third party,	➤ Standard Operating Procedures (SOPs) are developed for performance monitoring of pollution control devices and performance monitoring every year internally ➤ Performance monitoring of pollution control devices at every three year through an accredited third party will also be conducted.
vii.	In the Environmental Policy the hierarchy of reporting environmental non-compliances and emergencies should be clearly mentioned and submitted to the Regional Office of the MoEF&CC.	➤ The policy followed at SAIL for reporting environmental non-compliances and emergencies has already been submitted to MoEF&CC-New Delhi.
viii.	Solid waste management as committed in the reply to the ADS letter dated 02.01.2019 shall be complied.	Solid waste management as committed in the reply to the ADS letter dated 02.01.2019 will be complied.
B.	General conditions	
I.	Statutory compliance:	
i.	The project proponent shall obtain Consent to Establish / Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (prevention & Control of Pollution) Act 1974 from the concerned State pollution control Board/ Committee.	Online application for Consent to Establish has been submitted to Chhattisgarh Environment Conservation Board (CECB) on 22/07/2019 The Consent to Establish was granted by CECB Ref.no. 8779/TS/CECB/2021,dated 08/01/2021 for Five Years.
ii.	The project proponent shall obtain the necessary permission from the Central Ground Water Authority, in case of drawl of ground water / from the competent authority concerned in case of drawl of surface water required for the project.	No ground water will be used for the project.

iii.	The project proponent shall obtain authorization under the Hazardous and other Waste Management Rules, 2016 as amended from time to time.	BSP has obtained the Authorization for the handling of the Hazardous Waste Generated in the Plant from Chhattisgarh Environment Conservation Board which is valid up to 16/04/2024. Copy of the authorization is enclosed at Flag-D
II.	Air quality monitoring and preservation	
i.	The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R 277 {E} dated 31st March 2012 (Integrated iron & Steel) G.S.R 414 (E) dated 30 th May 2008 (Sponge Iron) as amended from time to time; S.O. 3305 (E) dated 7 th 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.	31 nos of CEMs have been installed covering all the process stacks and connected to SPCB and CPCB online servers and calibration of this system is being carried-out from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.
ii.	The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through labs recognized under Environment (Protection) Act, 1986.	Fugitive emissions are being monitored every quarter & report submitted to regulatory agencies.
iii.	The project proponent shall install system to carryout Continuous Ambient Air Quality monitoring for common/ criterion parameters relevant to the main pollutants released (e.g- PM10 and PM2.5 in reference to PM emission, and SOx and NOx in reference to SO2 and NOx emissions) within and outside the plant area at least at four locations (one within and three outside the plant area at an angle of 120° each), covering upwind and downwind directions	4 nos of Continuous Ambient Air Quality monitoring stations have been installed within and outside the plant area covering upwind and downwind directions Twelve air pollutants, as per the National Ambient Air quality standards-2009, namely, PM10, PM2.5, Carbon Monoxide (CO), Sulphur Dioxide (SO2), Nitrogen Dioxide (NO2), Ammonia (NH3), ground level Ozone (O3), Lead, Arsenic, Nickel, Benzene and Benzo (a) Pyrene are being measured (Note : Benzene and Benzo (a) Pyrene is measured offline)
iv.	The cameras shall be installed at suitable locations for 24X7 recording of battery emissions on the both sides of coke oven batteries and videos shall be preserved for at least one-month recordings.	Cameras have been installed at Coke ovens for recording of battery emissions

v.	Sampling facility at process stacks and at quenching towers shall be provided as per CPCB guidelines for manual monitoring of emissions	Sampling facilities at process stacks and at quenching towers have been provided as per CPCB guidelines for manual monitoring of emissions
vi.	The project proponent shall submit monthly summary report of continuous stack emission and air quality monitoring and results of manual stack monitoring and manual monitoring of air quality /fugitive emissions to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report,	Copies of monthly summary report of continuous stack emission and air quality monitoring and results of manual stack monitoring and manual monitoring of air quality /fugitive emissions (October-2021 to March-2022) is enclosed at Flag-E
vii.	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.	➤ Air Pollution Control (APC) systems have been provided for all the dust generating points including fugitive dust from all vulnerable sources. ➤ The stack & fugitive emissions monitored are meeting the standards..
viii.	The project proponent shall provide leakage detection and mechanised bag cleaning facilities for better maintenance of bags.	Diligent maintenance of Bags is being done & are replaced whenever there are leakages.
ix.	Secondary emission control system shall be provided at SMS Converters.	Secondary emission control system has been provided for SMS-3 Converters.
x.	Pollution control system in the steel plant shall be provided as per the CREP Guidelines of CPCB.	The Pollution control system as per the guidelines of CREP have been provided ➤ BOD plant for the treatment of effluents of COCCD ➤ Secondary emission control system has been provided for SMS-3 Converters ➤ Cast house Defuming systems have been provided for BF-8 & BF-7
xi.	Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads. shop floors, roofs, regularly.	Vacuum cleaners are being used to clean plant roads. Shop floor etc, regularly.
xii.	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.	➤ Iron ore fines, coal and coke fines, lime fines and such other fines collected in the pollution control devices are being recycled back to the process after appropriate treatment. ➤ A briquetting/ agglomeration plant on BOO basis will be installed in next 3 years for increasing the

		utilization of process sludges/dusts
xiii.	The project proponent use leak proof trucks/dumpers carrying coal and other raw materials and cover them with tarpaulin.	➤ At BSP railway wagons are being used for transportation of 95 % of the raw materials like coal & Iron ore. ➤ For internal transportation of raw materials leak proof trucks/dumpers are being used after proper covering.
xiv.	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)	➤ Facilities for spillage collection are provided for coal and coke on wharf of coke oven batteries
xv.	Land-based APC system shall be installed to control coke pushing emissions	Land-based APC system has been installed to control coke pushing emissions in Coke oven Battery-11.
xvi.	Monitor CO, HC and Oz in flue gases of the coke oven battery to detect combustion efficiency and cross leakages in the combustion chamber	Monitor CO, and O2 in flue gases of the coke oven battery to detect combustion efficiency and cross leakages in the combustion chamber are being measured.
xvii.	Vapour 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 installation of the system shall be explored in future based on feasibility
xviii.	In case concentrated ammonia liquor is incinerated, adopt high temperature incineration to destroy Dioxins and Furans. Suitable NOx control facility shall be provided to meet the prescribed standards	Regular monitoring of coke oven stack emissions is being done & The Gaseous emissions from Coke ovens are meeting the standards.
xix.	The coke oven gas shall be subjected to desulphurization if the sulphur content in the coal exceeds 1%.	At BSP the imported coal has sulphur content less than 1%.
xx.	Wind shelter piles, fence and chemical spraying shall be provided on the raw material stock piles	➤ Water sprinklers are installed for control of dust at raw material stock piles
xxi.	Design the ventilation system for adequate air changes as per ACGIH document for all tunnels, motor houses, Oil Cellars	Ventilation system for adequate air changes as per ACGIH document for all tunnels, motor houses, Oil Cellars are installed.
xxii.	The project proponent shall install Dry Gas Cleaning Plant with bag filter for Blast Furnace and-SMS convertor- (to be decided on case to case basis depending on type and size of plant)	➤ At BSP consultant MECON has recommended wet gas cleaning systems for BF's & SMS convertors as the Dry Gas Cleaning Plant are not feasible.
xxiii.	Dry quenching (CDQ) system shall be installed along with power	Dry quenching (CDQ) system along with power generation

	generation facility from waste heat recovery from hot coke	facility for waste heat recovery from hot coke has been installed for Coke Oven Battery-11.
III.	Water quality monitoring and preservation	
i.	The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R 277 (E) dated 31st March 2012 (Integrated iron & Steel); G.S.R 414(E) dated 30 May 2008 (Sponge Iron) as amended from time to time; S.O. 3305 (E) dated 7 th December 2015 (Thermal Power Plants) as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act 1986 or NABL accredited laboratories	➤ continuous effluent monitoring systems have been installed for all three plant outlets viz Outlet-A, B & C and are connected to SPCB and CPCB online servers ➤ Calibration of the systems is being carried-out regularly.
ii.	The project Proponent shall monitor regularly ground water quality at least twice a year (pre and post monsoon) at sufficient numbers of piezometer /sampling wells in the plant and adjacent areas through labs recognised under Environment (protection) act, 1986 and NABL accredited laboratories.	➤ Ground water quality monitoring at least twice a year (pre and post monsoon) in the adjacent areas through labs recognised under Environment (protection) act, 1986 and NABL accredited laboratories is being carried-out
iii.	The project proponent shall submit monthly summary report of continuous effluent monitoring and results of manual effluent testing and manual monitoring of ground water quality to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.	Monthly summary report of continuous effluent monitoring and results of manual effluent testing and manual monitoring of ground water quality reports (October-2021 to March-2022) are enclosed (Flag-F)
iv.	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 30s May 2008 (Sponge Iron) as amended from time to time; S.O. 3305 (E) dated 7e December 2015 (Thermal Power Plants) as amended from time to time as amended from time to time.	At BSP ETP for coke oven and by-product plant has been installed and is working effectively and meeting the standards prescribed in G.S.R 277 (E) dated 31st March 2012 (integrated iron & Steel);
v.	Adhere to 'Zero Liquid Discharge'	BSP has three outlets carrying plant effluent (Outlet-A , B &C). Effluent from outlet-A (About 5000 m3/Hr) is already being recycled and the recycling schemes for Outlet-B (450

		m3/hr) & Outlet-C (2500 m3/hr) are in advanced stage of completion.
vi.	Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.	A 30 MLD sewage recycling plant has been installed for treatment of recycling of domestic sewage generated in the Township.
vii.	Garland drains and collection pits shall be provided for each stock pile to arrest the runoff in the event of heavy rains and to check the water pollution due to surface run off	Garland drains and collection pits have been provided at the Raw Material handling area to check the water pollution due to surface run off
viii.	Tyre washing facilities shall be provided at the entrance of the plant gates	Complied.
ix.	CO ₂ injection shall be provided in GCP of SMS to reduce pH in circulating water to ensure optimal recycling of treated water for converter gas cleaning	At SMS, pH in circulating water of GCPs is being maintained through addition of Use of Dispersant Surfactant. The option of CO ₂ injection is also being explored.
x.	The project proponent shall practice rainwater harvesting to maximum possible extent	• At present rain water harvesting is being done from the rooftops of Plate Mill & Machine Shop-II area. Approx. 71500 m3 rain water is channelized to Maroda-I reservoir through storm water drains. • Recharge pits were constructed near 73 existing borewell to arrest the over flow /excess water. • Rain Water Harvesting structure were installed at T A Building, Bhilai Niwas, Bhilai Technical Institute, S.S School Sector-VII & G.S.S School-V. • 5 Recharge ponds were dug in Bhilai Township (Sector-3 near FSNL, Sector-3 near BTI Hostel, Sector-5 behind Andhra Bhawan, Hospital Sector near D-23, Jayanti Stadium) with recharge bore well at middle bottom of pond at two locations. • 1 big recharge pond of about 1 lac m3 capacity was made Behind Bhilai Institute of Technology (BIT) near

		Bhilai House with bore well at Centre.
xi.	Treated water from ETP of CCIBP shall not be used for coke quenching	At COB#11 dry quenching system has been installed.
xii.	Water meters shall be provided at the inlet to all unit processes in the steel plants	Water meters are installed at strategic locations to measure water flow to the process plants.
xiii.	The project proponent shall make efforts to minimise water consumption in the steel plant complex by segregation of used water, practicing cascade use and by recycling treated water	- Water consumption in the steel plant is being reduced through adoption of local recycling systems for all the Modernization units (URM,BRM, SMS-3 & BF-8). - The effluents from older units are being recycled back to cooling pond after treatment for re-use as industrial water.
IV.	Noise monitoring and prevention	- Regular noise monitoring is done at all the potential high noise generating areas like BFs, Power plants, Rolling Mills etc . - Acoustic enclosures, silencers etc have been provided at all the high noise zones to prevent workmen to the high noise exposure.
i.	Noise level survey shall be carried as per the prescribed guidelines and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report	Noise level survey is being carried as per the prescribed guidelines and report in this regard is enclosed (Flag-G)
ii.	The ambient noise levels should conform to the standards prescribed under E(P)A Rules. 1986 viz.75 dB(A) during day time and 70 dB(A) during night time	Regular Noise monitoring is being done at different locations of township (Market area, schools, hospitals, residential area) and ambient noise levels are meeting the standards (Flag-G)
V.	Energy Conservation measures	
i.	The project proponent shall provide TRTs to recover energy from top gases of Blast Furnaces	At new BF-8, TRTs to recover energy from top gases of Blast Furnace has been installed.
ii.	Coke Dry Quenching (CDQ) shall be provided for coke quenching for both	At new Coke oven Battaery-11, Coke Dry Quenching (CDQ)

	recovery and non-recovery type coke ovens	has been installed
iii.	Waste heat shall be recovered from Sinter Plants coolers and Sinter Machines	Waste heat recovery systems have been installed for Sinter Plants coolers and Sinter Machines of SP-3.
iv.	Use torpedo ladle for hot metal transfer as far as possible. If ladles not used, provide covers for open top ladles	At new BF-8, torpedo ladle is being used for hot metal transfer
v.	Use hot charging of slabs and billets/blooms as far as possible	Hot charging of slabs and billets/blooms is being done at Rolling mills.
vi.	Waste heat recovery systems shall be provided in all units where the flue gas or process gas exceeds 300°C	Waste heat recovery systems have been installed at Sinter Plants, Coke ovens, Blast Furnaces, Power Plants
vii.	Explore feasibility to install WHRS at Waste Gases from BF stoves; Sinter Machine; Sinter Cooler, and all reheating firm aces and if feasible shall be installed	Waste heat recovery systems have been installed at Sinter Plants, Coke ovens, Blast Furnaces, Power Plants. WHRs systems have also been installed in new units under Modernization In future more such units will be installed based on feasibility.
viii.	Restrict Gas flaring to < 1%	Complied/Noted.,
ix.	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	2x100 Kw solar power generation on roof tops of Bhilai Niwas has been installed & provision for online monitoring & recording of the power generation has also been developed.
x.	Provide LED lights in their offices and residential areas	Extensive use of LED lights in their offices and residential areas is being practiced.
xi.	Ensure installation of regenerative type burners on all reheating furnaces	regenerative type burners are being used for all reheating furnaces
VI.	Waste management	
i.	An attrition grinding unit to improve the bulk density of BF granulated slag from 1.0 to 1.5 Kg/ l shall be installed to use slag as river sand in construction industry	All the BF-Granulated slag generated in BSP is being supplied to Cement Industry. In future if & when there is shortage of demand from Cement Industry BSP will offer the slag to construction industry through a viable mechanism.
ii.	In case of Non-Recovery coke ovens, the gas main carrying hot flue gases to the boiler, shall be insulated to conserve heat and to maximise heat recovery	NA, At BSP the coke ovens are of recovery type.
iii.	Tar Sludge and waste oil shall be blended with coal charged in coke	At BSP Tar Sludge is being blended with coal charged in coke

	ovens (applicable only to recovery type coke ovens)	ovens & waste lubrication oil is being treated in a separate oil reclamation unit and recycled back after recovery/regeneration. The skimmed oil is being sold to authorized recyclers
iv.	Carbon recovery plant to recover the elemental carbon present in GCP slurries for use in Sinter plant shall be installed	Presently BSP is in the process of setting-up a sludge briquetting plant where all the sludges generated from the processes will be used. However BSP will also explore the process of recovery of elemental carbon from GCP sludges in future.
v.	Waste recycling Plant shall be installed to recover scrap, metallic and flux for recycling to sinter plant and SMS	At BSP recovery of scrap, metallic and flux is being done. The recovered scrap , iron fines, Lime fines, Mill scales is being recycled to BF & Sinter plants.
vi.	Used refractories shall be recycled as far as possible	Being done.
vii.	SMS slag after metal recovery in waste recycling facility shall be conditioned and used for road making, railway hack ballast and other applications. The project proponent shall install a waste recycling facility to recover metallic and flux for recycle to sinter plant. The project proponent shall establish linkage for 100% reuse of rejects from Waste Recycling Plant	At BSP SMS/BOF slag is being processed into different size fractions and recycled back to Sinter & BF as replacement of flux. BSP is also exploring methodologies for use of BOF slag for road making, railway ballast & other applications. We are seeking the services of Centre for Construction Development & Research National Council for Cement and Building Materials for exploring alternative applications for BOF slag. BSP has given an assignment to NIT-Raipur for assessing the suitability of steel slag as pavement material and feasibility of Steel slag in construction of the rural roads. The final report submitted in June-2021 is being shared with all govt & pvt agencies involved in Construction/road making activities to promote its use as construction/pavement material. Other Central R&D initiatives in SAIL for BOF slag& BF Slag utilization: • Pilot scale project on steam maturing of BOF Slag at

		BSL, Bokaro • Field trial on assessing suitability of weathered BOF slag as rail track ballasts at BSL, Bokaro • Supply of Air Cooled BF slag for construction of road under Four Laning Project of NH-32 at WB • Feasibility study on suitability of BOF Slag for use in cement industry through The Centre for Construction Development & Research of National Council for Cement and Building Materials (NCCBM), under the administrative control of Ministry of Commerce and Industry, Government of India, • Study on use of BOF slag as soil ameliorating agent in agriculture through Indian Agricultural Research Institute (IARI), New Delhi. • Use of steel slag in Open Graded Asphalt Friction Courses (OGAFC) through Department of Civil Engineering, IIT Guwahati.
viii.	100% utilization of fly ash shall be ensured. All the fly ash shall be provided to cement and brick manufacturers for further utilization and Memorandum of Understanding in this regard shall be submitted to the Ministry's Regional Office	100% utilization of fly ash as per Fly-ash rules is being followed at BSP. At BSP fly ash generation is very less as the boilers are run mostly on By-product gases generated from steel plant operations. The limited quantity of ash generated is being used for reclamation of low lying areas within the plant premises as per the fly-ash rules.
ix.	Oil Collection pits shall be provided in oil cellars to collect and reuse/recycle spilled oil. Oil collection trays shall be provided under coils on saddles in cold rolled coil storage area	Being Complied.
x.	The waste oil, grease and other hazardous waste like acidic sludge from pickling, galvanising chrome plating mills etc. shall be disposed of as per the Hazardous & Other waste (Management & Trans boundary	The acid sludge & other hazardous wastes are disposed of as per the Hazardous & Other waste (Management & Trans boundary Movement) Rules, 2016.

	Movement) Rules, 2016. Coal tar sludge / decanter shall be recycled to coke ovens	Coal tar sludge / decanter is being recycled to coke ovens or sold to authorized recyclers.
xi.	Kitchen waste shall be composted or converted to biogas for further use	Kitchen waste is composted and used for Horticulture as manure.
VII.	Green Belt	
i.	Green belt shall be developed in an area equal to 33% of the plant area with a native tree species in accordance with CPCB guidelines. The greenbelt shall inter alia cover the entire periphery of the plant	- BSP has planted 4540942 nos of trees in an area covering about 1885 hectares till Sep.-2023. - In the year 2023-24 BSP has been planted 25942Trees. 25650 saplings planted at Township and its surrounding area of Bhilai. Work awarded to C.G. Van Vikas Nigam. - In the year 2022-23(April-March), BSP has planted 21210 trees within the plant premises & township covering an area of about 20-25 hectares. - Further Green belt required to be developed to meet the 33% criteria is about <u>280 Hectares</u> . However by excluding the two reservoirs/cooling ponds area of 1100 hectares from the total area of the project, BSP's green belt coverage comes to 36.34 %.
ii.	The project proponent shall prepare GHG emissions inventory for the plant and shall submit the programme for reduction of the same including carbon sequestration including plantation.	BSP maintains its GHG emissions inventory & also the emission data is submitted to world steel association(WSA) every year under its commitment as member under Climate Action
VII I.	Public hearing and Human health issues	
i.	Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented	At BSP all departments have prepared their own Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan. The documents are approved by Factory Inspector. Regular mock-drills are organized to check the effectiveness of the

		EPP/DMPs and are updated based on the mock drill review and also based on recommendations from expert agencies engaged to review the safety management of BSP
ii.	The project proponent shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protection Equipment(PPE) as per the norms of Factory Act	National occupation Health Centre (NOHC) set-up at BSP regularly carry out heat stress analysis for the workmen who work in high temperature work zone . All the workmen are mandatorily provided with Personal Protection Equipment(PPE) as per the norms of Factory Act
iii.	Provision shall be made for the housing of construction labour 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. The housing may be in the form of temporary structures to be removed after the completion of the project	Complied (At BSP major expansion job has already been completed)
iv.	Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act	Being Complied. Occupational health surveillance of the workers is being done regularly.
IX.	Corporate Environment Responsibility	
i.	The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 1 st May 2018, as applicable, regarding Corporate Environment Responsibility	• BSP has initiated action for completion of all identified CER activities/projects committed in the reply to the ADS letter dated 02.01.2019. • Due to the prevalence of COVID pandemic there has been delay in completion of the projects. • However, presently the CER projects are progressing well & likely to be completed by March-2024. A detailed status report on CER activities enclosed at Flag-C
ii.	The Company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements / deviation/ violation of the environmental / forest/ wildlife norms/ conditions. The company shall have defined system of reporting infringements/ deviation/	BSP has well laid down environmental policy duly approve by the Board of Directors. An SOP for reporting of the non-compliance / infringements to Board of Directors (BoD) is also being followed. Accordingly, • Complying to MoEFCC OM dtd. 26th April 2011, status of statutory compliances is reported to Board on

	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	quarterly basis & in case of non-compliance received by statutory authorities it is reported to Board along with action plan in the next board meeting. • The Board Meetings are held once every month. • All the Environment & related Clearances & status of compliances are shown on company's website. Other information: • As per the Annexure-IV of the Department of Public Enterprises (DPE) Guidelines on Corporate Governance and Part-A of the Schedule-II of SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015, detailed information in respect of fatal or serious accidents, dangerous occurrences, any material effluent or pollution problems, is placed before the Board of Directors of SAIL. • As per the Part-A of Schedule-III of Securities Exchange Board of India (SEBI)'s (Listing Obligations and Disclosure Requirements) Regulations, 2015, occurrence of emergency, accidents, etc., if material in nature, is disclosed to the Stock Exchanges through Board of Directors within 24 hours.
iii.	A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization	• BSP has a separate Environmental Department with well-equipped laboratory. • Adequate Qualified executive & non-executive personnel have been posted to the department & Lab • The department is headed by a senior officer of the rank of General Manager who reports to Executive Director (works). • At corporate level a separate environment management Division has been set-up . • At corporate level the division is headed by Executive Director who reports to Director (technical)

iv.	Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of, action plan shall be reported to the Ministry/ Regional Office along with the Six Monthly Compliance Report.	Complied. A detailed action plan for implementation of EMPs along allocation of funds has been prepared & progress is being monitored on regular basis. Copy of the progress of implementation of action plan is enclosed (Flag-H)
v.	Self-environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.	Environmental Audits under EMS:ISO:14001 are being carried-out every year through external agencies. The Last Audi was carried-out by M/s.TUV-Nord in August-2020.
vi.	All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Iron and Steel plants shall be implemented	Complied
X.	Miscellaneous	
i.	The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently	Complied. Environmental clearance granted to BSP has been placed in the web portal of SAIL.
ii.	The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt	Complied
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	Complied
iv.	The project proponent shall monitor the criteria pollutants level namely; PM ₁₀ , SO ₂ , NO _x (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a	Complied. The monitoring data is being displayed at the Company's main gate & in a public place/market area located in

	convenient location for disclosure to the public and put on the website of the company	Township through large electronic Display Boards. The monitored data is also placed in Company's web portal
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	Complied
vi.	The project proponent shall submit the environmental statement for each financial year in Form-Y 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	Complied
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	Complied
viii.	The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government	Complied
ix.	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	Complied
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)	Will be Complied/agreed
xi.	Concealing factual data or submission of false /fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment(Protection) Act, 1986	Agreed
xii.	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory	Agreed
xiii.	The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions	Agreed

xiv.	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	Agreed
xv.	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	Agreed
xvi.	Any appeal against this EC shall lie with the National Green Tribunal, if preferred within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010	Agreed.

This issues with the approval of the Competent Authority.