सेल SAIL

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

GM I/c(EnMD)/B-8/2021/ 20

Date: 09/01/2021

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

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 (July'2020 to Dec'2020) 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,

Navin 9/1/21

(NAVIN KUMAR)
GM I/c (Env.MD)

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 24th 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 A K Bhatt 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	Shri Navin Kumar General Manager I/c (Environment) Bhilai Steel Plant, Bhilai – 490001 Phone – 0788 – 2860582 (M-9407981592)
6	**Salient Features**	
	a) Of the project	The summery 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 will take place within the 6286.75 Hectares under its possession. No additional land will be required for the expansion.
8	**Break up 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 rovisional 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
	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 and stabilization of BF-8.

c) **Operation of SMS-1, BBM and RMP-1** for three more years is permitted till stabilization of BF-8 and SMS-3.

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 to commence
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 dared 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 there has been delay in completion of the projects. • However, presently the CER projects are progressing well & likely to be completed by June-2021. • A detailed status report on CER activities enclosed at **Flag-C**
iii.	l00 % SMS -Slag utilisation shall be ensured after conditioning /steam curing.	• About 50% the BOF slag is presently being utilized in Road Making & filling of the low lying areas. • BSP is in touch with prospective buyers of BOF slag for sale of the slag • 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.
iv.	Scheme for decommissioning of SMSI and its utilities along with green belt development in that area shatl be submitted within six months to the Ministry and Regional Oflice of the MoEF&CC.	• . BSP has the clearance for operation of SMS-1 till May-2022. Accordingly decommissioning plan will be submitted to MoEFCC
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 4408986 nos of trees in an area covering 1840.47 hectares till December-2020. • In the year 2020-21 till December-2020, BSP has planted 30407 trees within the plant premises & township covering an area of 16 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 35.48 %. • BSP will plant about 3.5 lac trees in next 5 years to meet the target given by MoEFCC
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, l98l 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 is likely to be issued by CECB very shortly.
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 t986 vide G.S.R 277 {E) dated 3lst March 20l2(Integrated iron & Steel} G.S.R 414 (E) dated 30th May 2008 (Sponge lron) as amended from time to time; S.O. 3305 (E) dated 7th December 2015 (Thermal power Plants) as amended	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.

	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.	
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 $12O^0$ 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 (July-20 to Decemberr-2020) 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 10 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 BFs & SMS convertors as the Dry Gas Cleaning Plant are not feasible.
xxiii.	Dry quenching (CDQ) system shall be installed along with power generation facility from waste heat recovery from hot coke	Dry quenching (CDQ) system along with power generation 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 3ts(March 20I2 {Integrated iron & Steel); G.S.R 414(E) dated 30 May 2008 (Sponge lron) as amended from time to time; S.O. 3305 (E) dated 7th December 2015 (Thermal Power	➢ 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.

	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	
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 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 3lst March 2012 (integrated iron & Steel); G-S.R 414 (E)dated 30s May 2008 (Sponge lron) 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 3lst 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 shalt 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 recovery and non-recovery type coke ovens	At new Coke oven Battaery-11, Coke Dry Quenching (CDQ) 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^{o}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 < l%	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/ I 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 ovens (applicable only to recovery type coke ovens)	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
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 I00% 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 for assessing the suitability of steel slag as pavement material and feasibility ofteel slag in construction of the rural roads. 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-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
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 Movement) Rules, 2016. Coal tar sludge / decanter shall be recycled to coke ovens	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.
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	• BSP has planted 4408986 nos of trees in an area covering 1840.47 hectares till December-2020.

	greenbelt shall inter alia cover the entire periphery of the plant	• In the year 2020-21 till December-2020, BSP has planted 30407 trees within the plant premises & township covering an area of 16 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 35.48 %. • BSP will plant about 3.5 lac trees in next 5 years to meet the target given by MoEFCC
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 1st 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 June-2021. 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/ 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	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 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 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)
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	Complied. A detailed action plan for implementation of EMPs along allocation of funds has been prepared & progress is being

	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.	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, 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	Complied. The monitoring data is being displayed at the Company's main gate & in a public place/market area located in Township thorugh 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 lo 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	Agreed

	cooperation to the officer(s) of the Regional Office by furnishing the requisite data/ information/ monitoring reports	
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 Counts 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 Sction16 of the National Green Tribunal Act,2010	Agreed.

This issues with the approval of the Competent Authority.

FLAG-A

ENERGY MANAGEMENT DEPTT.

BHILAI STEEL PLANT

DATE: 02.07.20

SUB: MOCK DRILL CONDUCTED IN GCP-7 AREA OF EMD ON 02.07.20.

Background:

A BF gas leakage incident took place at 11.30 hrs on 02.07.2020. in the drainer which is connected to a float chamber located near Demister which requires flushing on daily basis.

On 02.07.20 , during A- shift , two employees of GCP-7 namely Mr P Srinivas and Mr Ganesh Goswami were assigned flushing job of the drainer of float chamber near Demister. Around 11.30 hrs, as per operating procedure , in order to release condensate, the flush valve was opened manually by Mr Ganesh while Mr Srinivas standing nearby .

Unaware of a gas leakage from the valve flange, Mr Ganesh continued to execute the flushing job and all of sudden he was exposed to the BF gas leakage from the flange and fell unconscious. Immediately the other accompanying employee Mr Srinivas tried to pull away the gas affected employee and simultaneously informed the line manager Mr S C Pandey. In turn Mr S C Pandey informed EMD Energy Centre and GCP Incharge Mr Ajay Gajghate and rushed to the location for managing the emergency situation.

The Energy Centre , immediately conveyed the gas leakage incident to Gas safety, Plant control, CISF, civil defence, SED, MMP, & Firebrigade . The informed agencies were reached to the incident spot immediately. The affected employee was shifted to Plant Medical post immediately by ambulance with the help of gas safety group. Thereafter the BF gas leakage was arrested from the valve flange by Gas safety group and they also gave clearance for normalising the area.

During the gas leakage incident, Fire Services personnel carried out the complete surveillance of the area. CISF personnel cordoned off the entire area for restricting movement of people till clearance given by Gas Safety. Chief controller Mr.V.K. Srivastava - CGM & HOD (EMD) took control of the situation . Gas safety group inspected the area and arrested the gas leakage , area was normalised at 11.53 hrs. Deatails of events is in Annexure-I.

Review Meeting:

A review meeting was conducted by Shri. V.K. Srivastava , CGM(EMD) after the Mock drill and following observations were noted:

1. Information to firebrigade was missed in the first cycle of information . Then it ws informed in the second cycle only.

2. In Plant main medical post , the phone was not lifted up immediately.

Recommendations:

1. A check list of agencies along with contact numbers is already made available in Energy Centre. It is to be checked and not missed during emergeny situations.

2. Red flags to be made available in all sections, to manage any emergeny situations by cordoned off the area till the arrival of CISF .

Conclusion: The Mock drill was carried out successfully and all agencies performed satisfactorily.

08.07.20

(J THULASI DASAN)
DY. GEN. MANAGER & DSO
ENERGY MANAGEMENT DEPTT.

All Concerned:

1. Dy. Director, (IH&S), Durg, C.G. (Through GM (safety & Fire))
2. CGM (Safety & Fire)
3. Dy. Commandant (plant), CISF
4. Sr. Dy Director I/c (NOHSC)
5. Chief Fire Officer , BSP
6. CGM (EMD)
7. Sr. TA to ED (Works)
8. Sr. TA to CEO
9. Plant Control
10. DSO (EMD)

ENERGY MANAGEMENT DEPTT.

BHILAI STEEL PLANT

ANNEXURE:1

S.N.	SEQUENCE OF EVENTS	AGENCY INFORMED TIME	AGENCY ARRIVED AT SPOT TIME
1	GAS LEAKAGE INCIDENT	11-35	-
2	ENERGY CENTRE	11-35	-
3	GAS SAFETY	11-35	11-40
4	Shri. V.K. Srivastava -CGM & HOD-(EMD)	11-35	11-40
5	Shri. B.K. Sinha-(GM I/c EMD)	11-36	11-41
6	Shri. Ajay Gajghate-GM (EMD)	11-36	11-41
7	PLANT CONTROL	11-37	-
8	C.I.S.F.	11-37	11-48
9	C.I.S.F. (TEAM)		11-52
10	CIVIL DEFENCE	11-37	11-41
11	M.M.P	11-39	11-43
12	GAS VICTIM REMOVED	11-43	-
13	S.E.D	11-38	11-45
14	FIRE BRIGADE	11-44	11-49
15	GAS SAFETY CLEARANCE	11-53	-

NOTE: It took 18 minutes to normalise the gas leakage incident.

ऊर्जा प्रबधन विभाग
भिलाई इस्पात संयंत्र

क्र: म.प्र.(ऊ.प्र.वि.)/2020/913 DT. 14.12.2020

विषय : ऊर्जा प्रबंधन विभाग में "गैस के रिसाव " होने के विषय पर मोक ड्रिल अभ्यास की रिपोर्ट।

कारखाना अधिनियम के अनुसार तथा OHSAS -18001-2007 एवं ISO -14001 के तहत ऊर्जा प्रबंधन विभाग में प्रतिवर्ष दो बार विभिन्न आपात स्तिथियो पर मोक ड्रिल का अभ्यास किया जाता है । ऊर्जा प्रबंधन विभाग में Normalising गैस बूस्टर स्टेशन है जहाँ मिक्स्ड गैस (कोक ओवेन गैस एवं ब्लास्ट फर्नस गैस का मिश्रण) के दाव को बूस्ट करने के बाद Normalising Furnaces को भेजा जाता है ।

इस वर्ष का दूसरा मोक ड्रिल दिनांक **10.12.2020** को शाम **6.21** बजे Normalising गैस बूस्टर स्टेशन के Booster No. 2, जो कि चालू थी, उसके आउटलेट लाइन (impeller के पास) में एक छोटी होल हो जाने से गैस रिसाव होने लगा और बगल के गैस बूस्टर न. ३ में काम कर रहें दो मेकनिकल के कार्मिक (श्री तनिश खुजूर एवं श्री पुरुषोत्तम राठौर) गैस रिसाव के कारण आहत होने के विषय पर आयोजित किया गया । घटनाक्रम निम्नरूप से घटित हुआ।

समय शाम	विवरण
3.00बजे	**Normalising Gas booster station** में गैस बूस्टर न. २ चालू condition में था और बंद गैस बूस्टर न. ३ के impeller outlet flange joint के बोल्ट्स को बदलने का काम mechanical के श्री मूर्ति (वरि. प्रब.) के supervision में मेकनिकल के दो कार्मिक, श्री तनिश खुजूर एवं श्री पुरुषोत्तम राठौर, काम कर रहें थे । काम करने का clearance operation के Chargeman श्री नरेश गार्डिया ने दिया था । उस समय मशीन हॉल के भीतर गैस रिसाव शून्य था ।
6.21बजे	अचानक से शाम **6.21** बजे श्री तनिश खुजूर के पास जो CO मॉनिटर था., उससे बीप की आवाज़ आने लगा और उन्होंने पाया की CO मॉनिटर में 2000 पीपीएम से ज्यादा गैस का concentration आ रहा है । वो तुरंत नीचे उतरा और अपने साथी को उतारने लगा , तभी उसे हल्का चक्कर आने लगा और वो चार कदम आगे बढकर गिर गया । श्री पुरुषोत्तम राठौर जो बाद में आ रहें थे , वो भी नीचे गिर पढ़े । हलचल देखकर श्री मूर्ति और श्री नरेश गार्डिया मशीन हॉल के तरफ दौड़ पढ़े , परन्तु जब दोनों साथियों को मूर्छित अवस्था में देखे तो वे स्थिति को समझ गए और श्री नरेश गार्डिया ने तुरंत गैस बूस्टर न. २ जो चालू condition में था उसे बंद किया और **एनर्जी सेंटर (6.23 pm)** तथा **Section Incharge** श्रीमती पुष्पा एम्ब्रोस **(6.24 pm)** को

	सूचित किया । श्री मूर्ति ने कंट्रोल रूम से इमरजेंसी सायरन बजाया (**6.24 pm**) । फिर वे श्री नरेश गार्डिया के साथ रोड पर लाल झंडा लेकर मदद का इन्तेज़ार करने लगे । श्री मूर्ति वर्क इंसिडेंट कंट्रोलर का रोल निभाने लगे ।
6.28 बजे	**Section Incharge** श्रीमती पुष्पा एम्ब्रोस ने तुरंत विभागीय सुरक्षा अधिकारी श्री बी के सिन्हा को सूचित किया और वे site पर पहुंच गयी । वहाँ पहुँच कर वे स्थिति का मुआयना करने के बाद इंसिडेंट कंट्रोलर का रोल निभाने लगी ।
6.24 - 6.28 बजे	एनर्जी सैंटर **Emergency Declare** करता है तथा तत्काल फायर ब्रिगेड , मेन् मेडिकल पोस्ट -1 , सी.आय . एस . एफ कंट्रोल , गैस सेफ्टी , विभागाध्यक्ष , सेफ्टी कंट्रोल , प्लांट कंट्रोल , सिविल डिफेंस एवं एनर्जी सैंटर इंचार्ज को क्रमानुसार सूचित करता है।
6.29 बजे	विभागीय सुरक्षा अधिकारी श्री बी के सिन्हा , अस्सेम्ब्ली पॉइंट पहुचकर , स्थिति का मुआयना करने के बाद, चीफ इंसिडेंट कंट्रोलर का रोल निभाने लगे ।
6.30 बजे	सी.आय.एस.एफ का दल अस्सेम्ब्ली पॉइंट पहुचता है तथा चीफ इंसिडेंट कंट्रोलर के निर्देश पर घटना स्थल तक जाने के सभी रास्तो को बंद करता है।
6.31 बजे	फायर ब्रिगेड दल अस्सेम्ब्ली पॉइंट पहुचता है तथा गैस मास्क पहनकर श्री तनिश खुजूर एवं श्री पुरुषोत्तम राठौर को घटना स्थल से बाहर निकालता है तथा अस्सेम्ब्ली पॉइंट में पहुंचाता है और आवश्यक फर्स्ट एड देता है ।
6.32 - 6.41बजे	एम्बुलेंस पहुचती है तथा आहत व्यक्तियों को असेम्बली पॉइंट से एम्बुलेंस में डाला जाता है तथा एम्बुलेंस को **MMP-1** रवाना किया जाता है ।
6.34 बजे	श्री एस के दशोरे , गैस सेफ्टी इंचार्ज, अपने गैस सेफ्टी दल के साथ आवश्यक गैस मास्क एवं अन्य उपकरण सहित मौके पर पहुँचते हैं तथा इंसिडेंट कंट्रोलर से स्थिति का मुवायना करते हैं । फिर वे अपने दल को आवश्यक निर्देश देते हैं ।
6.36 बजे	गैस सेफ्टी दल गैस मास्क पहनकर मशीन हॉल के अंदर जाते हैं । चेकिंग के द्वारा उन्हें यह पता चला की Booster No. 2, जो कि चालू थी, उसके आउटलेट लाइन (impeller के पास) में एक छोटी होल हो जाने से वही से गैस का रिसाव हो रहा था । दल ने तुरंत लकड़ी के एक गुटके के द्वारा उस होल को सील किया जिससे गैस का रिसाव बंद हो गया और वे बाहर आ गए ।
6.43 बजे	श्री एस के दशोरे , गैस सेफ्टी इंचार्ज ने एरिया मोनिटरिंग कर गैस रीडिंग नोर्मल होने की सुचना श्री बी के सिन्हा चीफ इंसिडेंट कंट्रोलर को दी ।
6.48 बजे	चीफ इंसिडेंट कंट्रोलर ने ऑपरेशन , गैस सेफ्टी , फायर ब्रिगेड , सी.आय.एस. एफ से चर्चा की तथा ऑल क्लियर का निर्देश दिया। कंट्रोल रूम से श्री नरेश गार्डिया ने ऑल क्लियर का सायरन बजाया ।
6.49 बजे	एनर्जी सेंटर को स्थिति सामान्य होने की सुचना दी गयी ।

मोक ड्रिल के पश्चात **11.12.2020** सुबह **10.00** बजे मोक ड्रिल के संबंध में एक पोस्ट मोक ड्रिल बैठक मुख्य महाप्रबंधक के कार्यालय में आयोजित की गयी जिसमे सभी विभागों के प्रतिनिधि शामिल हुए। बैठक में मोक ड्रिल अभ्यास में सुधार हेतु निम्मलिखित अवलोकन एवं सुझाव प्राप्त हुए।

अवलोकन एवं सुझाव :

स.	अवलोकन	सुझाव	जिम्मेदारी	कार्यवाही
१.	सुरक्षा अभियांत्रिकी विभाग के प्रतिनिधि मौके पर नहीं पहुच पाए	SED के पाली प्रभारी अपने इंचार्ज को सूचित करें और मौके पर पहुँचने का प्रयास करें	Actg. CGM (Safety & Fire)	Agreed
२.	सिविल डिफेंस के प्रतिनिधि मौके पर नहीं पहुच पाए	.....	CIVIL DEFENCE	Agreed
३.	फायर ब्रिगेड के दल को रास्ता स्पष्ट नहीं था	Fire In charge to impart topography training to the team	I/c (Fire)	Agreed

अंत में विभागाध्यक्ष ने इस मोक ड्रिल को सफल बताया तथा सभी विभाग प्रतिनिधियों को सहयोग के लिए धन्यवाद दिया।

Encl.: Annexure for Response time

14/12/20
(बी के सिन्हा)
म.प्र एवं वि.सु.अधि. (ऊ.प्र.वि.)
ऊर्जा प्रबंधन विभाग

15/12/2020
मुख्य महा प्रबंधक एवं कारखाना प्रबंधक (ऊर्जा प्रबंधन विभाग)
कार्यकारी मु म.प्र (प्र) (सुरक्षा एवं अग्निशमन)

प्रति :

1. उप संचालक (औद्योगिक स्वास्थ एवं सुरक्षा), छ.ग. शासन, दुर्ग संभाग, दुर्ग
2. वरि. उप संचालक (प्र) व्यावसायिक स्वास्थ केंद्र: through email
3. चीफ फायर ऑफिसर (अग्नि शमन विभाग) : through email
4. सीनीयर टी ए टू ई डी वर्क्स : through email
5. प्लांट कंट्रोल : through email
6. उप कमांडेंट सी आइ एस एफ (बोरिया गेट) : through email
7. वरिष्ठ प्रबंधक (नागरिक सुरक्षा संगठन) : through email
8. सभी सेक्सन इनचार्जेस (ई एम डी) : through email

DSO - EMD

Observer's Check List (10.12.2020)

SECOND MOCK DRILL-2020

GAS POISONING IN NORMALISING GAS BOOSTER STATION

SL NO.	SEQUENCE OF EVENTS	INFORMING TIME	REACHING TIME
1	Actual time of gas poisoning incident	6.21 pm	6.23 pm
2	Energy Center	6.23 pm	6.23 pm
3	Section Incharge	6.24 pm	6.28 pm
4	DSO	6.25 pm	6.29 pm
5	Fire brigade	6.24 pm	6.31 pm
6	MMP	6.24 pm	6.32 pm
7	CISF	6.25 pm	6.30 pm
8	Gas Safety	6.26 pm	6.34 pm
9	HOD (EMD)	6.26 pm	------
10	Safety Engg Department	6.27 pm	-------
11	Plant Control	6.27 pm	-------
12	Civil Defence	6.28 pm	--------
13	Clearance given by Chief Incident Controller	---------	6.48 pm
14	Clearance given to Energy Centre	---------	6.49 pm

(बी के सिन्हा)

म.प्र एवं वि.सु.अधि. (ऊ.प्र.वि.)

ऊर्जा प्रबंधन विभाग

सेल SAIL भि.इ.सं. B.S.P.	चिकित्सा विभाग Medical Deptt. बाह्य रोगी कक्ष टिकट OPD TICKET	O & M Med - 35

I.M.F.-1

बा. रोगी क्र S.No. 4953 हकदार
OPD No. : Date 10/12/20 ENTITLED
नाम
Name : Tanish Kujur
पता
Address : DEI ISM D
व्यवसाय आयु लिंग
Occupation : 403078 Age 35 Sex M

दिनांक Date	उपचार Diagnosis/ Treatment
10/12/20	Mucodril
Rs. 50/-	

Devesh Printers, Qty- 5000Pcs./Jan.-2019

सेल SAIL भि.इ.सं. B.S.P.	चिकित्सा विभाग Medical Deptt. बाह्य रोगी कक्ष टिकट OPD TICKET	O & M Med - 35

बा. रोगी क्र 1. M. P.-1 हकदार
OPD No. :..... S.No. 6952 ENTITLED
Date 10-12-20
नाम
Name :.....Purushotam Rathor.....
पता
Address :.....RCF 12 MD.....
व्यवसाय आयु लिंग
Occupation :..Labour.. Age ..35.. Sex ..M..

दिनांक Date	उपचार Diagnosis/ Treatment
10/12/20 6.50PM	Medicine

Devesh Printers, Qty- 5000Pcs./Jan.-2019

FLAG-B

Safety Training Coverage: (Cal. Year-2020)

Module: Behavior Based Safety

Executive			Non-Executive	
Month	**#Prog.**	**# Participants**	**#Prog.**	**# Participants**
JAN	**1**	**21**	**2**	**78**
FEB	**1**	**26**	**2**	**68**
MARCH	**1**	**30**	**2**	**76**
AUG	**1**	**21**	**-**	**-**
TOTAL	**4**	**98**	**6**	**222**

M/s SWASYA Solutions

1. **Understanding Your Culture – 469 Executives covered 20 Programmes**
2. **Leadership Training - 171 Executives covered in 8 Programmes**

****

FLAG-C

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

(Status as on Dec. 2020)

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.

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 09/12/2020)
1.	BSP	Selud, Durg	I. New Bore well fitted with Solar operated pump with storage tank at three places to be provided.	**15.00**	Work order has been placed for Digging of 03 nos. bore-wells in village Selud, .Bore wells will to be fitted with solar pumps through CREDA. 1) No boring near Gram Panchayat Office Bazaar Chowk. 2) Boring done In-front of Primary School. 3) In a different place third boring was done.
			II. Four Seater Sulabh Shauchalya at Bazar Chowk to be constructed.	**6.00**	– Bazaar Chowk (side by Gram Panchayat office: Public toilet: Marking was made No excavation work started.
			III. Sports equipments for boys and girls to be provided.	**0.50**	Completed

Selud (Status of CER Projects As on 09/12/2020)

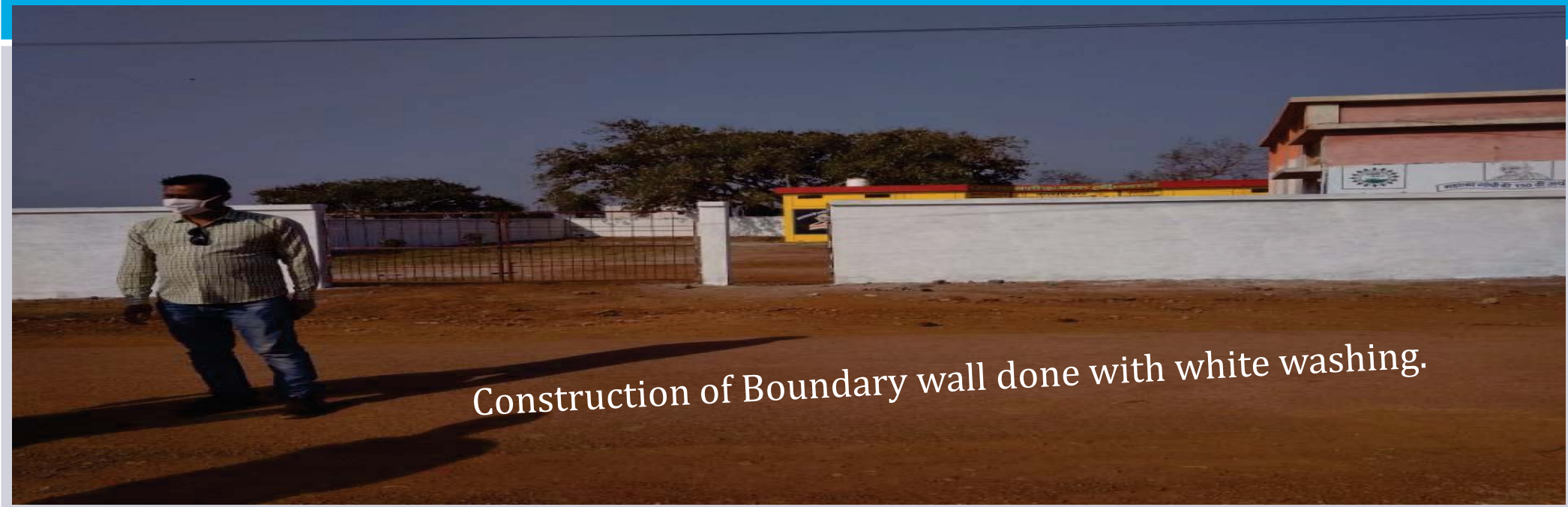
– Bazaar Chowk (side by Gram Panchayat office: Public toilet: Marking was made, & No excavation work started

Boring done In-front of Primary School.

a different place third boring
as done

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 09/12/2020)
2.	BSP	Khapri (Kutelabhata),Durg	I. Construction of Boundary wall of Panchayat Bhawan along with tree plantation all around the periphery	**10.00**	Construction of Boundary wall done with white washing.
			II. New Bore wells at 2 locations fitted with Solar operated Pumps to be provided.	**10.00**	Work order has been placed for Digging of 02 nos. bore-wells in village Khapri, .Bore wells will to be fitted with solar pumps through CREDA. Tendering process for the same in progress. Delay due to COVID and lockdown.
			III. Two extra rooms in Govt. Primary School to be constructed.	**10.00**	Construction of school building completed, some civil work is balanced.
			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

Khapri (Status of CER Projects As on 09/12/2020)



Construction of Boundary wall done with white washing.

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 09/12/2020)
3.	BSP	Dumardih ,Durg	I. Service road from main road cremation ground approx..700 meters to be cemented	**10.00**	Work order has been placed and work to be started. Delay due to COVID and lockdown.
			II. Pipeline for drinking water pipeline to be extended further by 1000 m approx.	**7.00**	Work order has been placed and work to be started. Delay due to COVID and lockdown.
4.	BSP	Pauwara,Durg	I. Sanitary Pad Machine women group to be provided	**3.00**	Tendering process for the same in progress. Delay due to COVID and lockdown.
			II. Pipeline for drinking water pipeline to be extended further by 1000 m approx.	**7.00**	Work order has been placed and work to be started. Delay due to COVID and lockdown.
			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

Tree plantation at new talab,Syntax tank with pump provided at Health Centre. (Pauwara)

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 09/12/2020)
5.	BSP	**Muskan ,Durg**	I. Garage for School Bus at Muskan School to be constructed.	**1.00**	Shed is completed, but some civil work & sheet laying are balanced
6.	BSP	**Pathora , Durg**	I. Four Seater SulabhShauchalya at Govt. Middle school for boys to be constructed.	**3.00**	Excavation work for toilet construction in progress .
			II. Boundary wall at high school of length 165 meter to be constructed.	**15.00**	Work order has been placed and work to be started. Delay due to COVID and lockdown.
7.	BSP	**Dhuara bhatta, Durg**	I. Four seater SulabhShauchalya at KhadanTalab for both men and women to be constructed.	**12.00**	Excavation work for toilet construction in progress .
			II. Additional 2 class rooms at High school premise to be constructed.	**10.00**	Work is in progress.
			III. Boundary wall of approx. - 380 meters to be constructed at high school premise.	**20.00**	Work is in progress.
			IV.Construction of separate		Work is in progress.

Dhaurabhata (Status as on 9/12/20)

Construction of Class rooms is in progress

Toilet: For school students boys and girls: Construction work in progress.

Toilet for Public near Talab: Excavation work 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 09/12/2020)
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**	Work order has been placed and work to be started. Delay due to COVID and lockdown.
			II. C.C. road to be constructed at ward no 05 for approx. 250 meters.	**4.00**	Work order has been placed and work to be started. Delay due to COVID and lockdown.
			III. C.C. road to be constructed at ward no 04 for approx. 250 meters.	**4.00**	Work order has been placed and work to be started. Delay due to COVID and lockdown.
			IV. Four seater SulabhhShauchalya for boys and girls to be constructed.	**12.00**	Work is in progress.
9.	BSP	**Aundhi,Durg**	I. Pipeline for drinking water pipeline to be extended further by 1000 m approx.	**7.00**	Work order has been placed and work to be started. Delay due to COVID and lockdown.
			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**	Work order has been placed and work to be started. Delay due to COVID and lockdown.
10.	BSP	**Pahandor, Durg**	I. New Bore wells at required location fitted with solar operated Pumps to be provided.	**10.00**	Two Boring was done.
			II. Pipeline for drinking water pipeline to be extended further by 1000 m approx.	**7.00**	Work is in progress.

Status of CER Projects As on 09/12/2020

Pahandor Borewell done

Toilet for school students 1 for boys and 1 for girls:Construction work in progress.(**Mahakakala**)

Dhaurabhata: School Boundary wall is in progress.

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 09/12/2020)
11.	BSP	**Bhila,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**	Work is in progress.
			II. Four seater Sulabh Shauchalya for men and women to be constructed	**12.00**	Work is in progress.
			Total	**232.25**	

Mahakakhurd (Status of CER Projects As on 09/12/2020)

Public toilet (Both men & women): Excavation work in progress. No boring was made. No water sources found nearby construction of toilet. This toilet about 400 to 500 mtrs. away from village

Boring was done

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

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.

---00---

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

BHILAI STEEL PLANT July to Dec 2020

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 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%)
SMS – 2											
LF-1	Ladle Furnace	60	1.65	Bag Filter	10 Jul	1320	90414	48.13	69.80	-	-
LF-2	Ladle Furnace	50	1.50	Bag Filter	18 Jul	3360	101170	46.03	80.60	-	-
LF-1	Ladle Furnace	60	1.65	Bag Filter	20 Aug	1822	101268	47.87	92.00	-	-
LF-2	Ladle Furnace	50	1.50	Bag Filter	11 Aug	1680	102262	44.80	75.00	-	-
LF-1	Ladle Furnace	60	1.65	Bag Filter	11 Sep	2160	102962	46.27	89.60	-	-
LF-2	Ladle Furnace	50	1.50	Bag Filter	18 Sep	2400	105017	42.15	77.60	-	-
LF-1	Ladle Furnace	60	1.65	Bag Filter	09 Oct	2880	105344	47.2	82.80		
LF-2	Ladle Furnace	50	1.50	Bag Filter	16 Oct	3000	105506	46.78	79.60		
LF-1	Ladle Furnace	60	1.65	Bag Filter	21 Nov	3000	105663	48.25	91.80	-	-
LF-2	Ladle Furnace	50	1.50	Bag Filter	26 Nov	2460	105254	34.24	72.90	-	-
LF-1	Ladle Furnace	60	1.65	Bag Filter	10 Dec	3120	105672	48.20	-		
LF-2	Ladle Furnace	50	1.50	Bag Filter	01 Dec	3240	104447	43.76	-		
Blast Furnace											
BF-1 (Process)	Stoves	60	2.5	GCP (Scrubber)	21 Jul	1061	57528	17.59	89.60	79.60	
BF-7 (Process)	Stoves	70	3.5	GCP	17 Jul	3528	101974	17.10	102.60	112.20	

				(Scrubber)							
BF-5(Process)	Stoves	60	3.5	GCP (Scrubber)	22 Sep	1408	113698	17.24	104.60	112.70	-
BF-8(Process)	Stoves	70	3.5	GCP (Scrubber)	15 Sep	7561	157194	19.06	81.00	109.60	-
BF-5(Process)	Stoves	60	3.5	GCP (Scrubber)	17 Oct	1850	110183	18.85	103.40	123.70	-
BF-6(Process)	Stoves	70	3.5	GCP (Scrubber)	17 Oct	1216	106958	20.97	105.10	120.40	-
BF-6(Process)	Stoves	60	3.5	GCP (Scrubber)	07 Nov	2131	109681	19.26	108.70	123.60	-

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 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:800 mg/$Nm3_)$	**NO_x (Norm:500 mg/Nm3)**	**CO** (Norm: 3 kg/Tof Coke
Coke Oven											
Battery No. 1	Battery	100	3.5	Nil	02 Jul	827	112635	43.97	114.00	94.00	2.71 Kg/T coke
Battery No. 4	Battery	100	3.5	Nil	04 Jul	815	118487	46.76	114.70	110.00	2.67 Kg/T coke
Battery No. 6	Battery	100	3.5	Nil	07 Jul	731	121367	41.78	106.20	110.00	2.49 Kg/T coke
Battery No. 9	Battery	100	3.5	Nil	06 Jul	1407	195333	45.76	103.60	113.20	2.79 Kg/T coke
Battery No. 11	Battery	120	4.2	Nil	02 Jul	1568	181734	38.90	120.50	114.00	2.81Kg/T coke
Battery	Battery	100	3.5	Nil	12 Aug	905	111761	39.52	67.20	70.80	2.68 Kg/T coke

BHILAI STEEL PLANT July to Dec 2020

No. 1											
Battery No. 3	Battery	100	3.5	Nil	28 Aug	748	111265	48.83	114.00	92.40	2.70 Kg/T coke
Battery No. 4	Battery	100	3.5	Nil	17 Aug	748	110573	45.88	102.10	98.00	2.53 Kg/T coke
Battery No. 6	Battery	100	3.5	Nil	05 Aug	726	116667	41.53	108.60	116.40	2.57 Kg/T coke
Battery No. 9	Battery	100	3.5	Nil	04 Aug	1649	203763	45.14	101.94	91.50	2.71 Kg/T coke
Battery No. 11	Battery	120	4.2	Nil	06 Aug	1689	180885	48.30	112.00	118.60	2.78Kg/T coke
Battery No. 1	Battery	100	3.5	Nil	03 Sep	894	109017	45.44	110.00	88.70	2.59 Kg/T coke
Battery No. 3	Battery	100	3.5	Nil	09 Sep	759	83550	46.25	98.60	103.80	2.65 Kg/T coke
Battery No. 4	Battery	100	3.5	Nil	09 Sep	759	91572	40.08	89.50	98.60	2.61 Kg/T coke
Battery No. 6	Battery	100	3.5	Nil	04 Sep	860	112038	31.93	95.30	102.40	2.70 Kg/T coke
Battery No. 9	Battery	100	3.5	Nil	05 Sep	1769	192040	45.49	105.80	110.40	2.72 Kg/T coke
Battery No. 11	Battery	120	4.2	Nil	02 Sep	1789	174105	42.51	91.60	108.60	2.74 Kg/T coke
DCDA Acid Plant	DCDA Acid Plant	40	0.8	Absorption Tower	26 Sep	76	9453	-	1.63 Kg/T Sulphuric Acid	-	-
Battery No. 1	Battery	100	3.5	Nil	07 Oct	938	110746	45.47	106.90	89.70	2.49 Kg/T coke
Battery No. 3	Battery	100	3.5	Nil	03 Oct	849	97396	48.34	96.40	106.30	2.74Kg/T coke
Battery No. 4	Battery	100	3.5	Nil	03 Oct	838	106625	47.26	93.20	96.40	2.55Kg/T coke
Battery No. 6	Battery	100	3.5	Nil	15 Oct	860	104829	42.67	102.50	115.20	2.66 Kg/T coke
Battery No. 9	Battery	100	3.5	Nil	01 Oct	1809	177970	39.86	98.60	116.40	2.85 Kg/T coke
Battery	Battery	120	4.2	Nil	05 Oct	1829	169897	47.14	118.70	116.00	2.76 Kg/T coke

No. 11											
DCDA Acid Plant	DCDA Acid Plant	40	0.8	Absorption Tower	22 Oct	70	11201	-	1.93 Kg/T Sulphuric Acid	-	-
Battery No. 1	Battery	100	3.5	Nil	03 Nov	916	109250	38.15	102.40	113.70	2.46 Kg/T coke
Battery No. 3	Battery	100	3.5	Nil	30 Nov	938	109073	***48.50***	94.80	102.90	2.67 Kg/T coke
Battery No. 4	Battery	100	3.5	Nil	10 Nov	860	110656	***45.33***	92.40	104.30	2.62 Kg/T coke
Battery No. 6	Battery	100	3.5	Nil	06 Nov	927	108903	37.57	90.70	94.90	2.69 Kg/T coke
Battery No. 9	Battery	100	3.5	Nil	02 Nov	1709	197995	43.12	102.30	120.60	2.79 Kg/T coke
Battery No. 11	Battery	120	4.2	Nil	04 Nov	1850	164008	36.32	105.20	126.70	2.75 Kg/T coke
Battery No. 1	Battery	100	3.5	Nil	03 Nov	916	109250	38.15	102.40	113.70	2.46 Kg/T coke
Battery No. 3	Battery	100	3.5	Nil	30 Nov	938	109073	***48.50***	94.80	102.90	2.67 Kg/T coke
Battery No. 4	Battery	100	3.5	Nil	10 Nov	860	110656	***45.33***	92.40	104.30	2.62 Kg/T coke
Battery No. 6	Battery	100	3.5	Nil	06 Nov	927	108903	37.57	90.70	94.90	2.69 Kg/T coke
Battery No. 9	Battery	100	3.5	Nil	02 Nov	1709	197995	43.12	102.30	120.60	2.79 Kg/T coke
Battery No. 11	Battery	120	4.2	Nil	04 Nov	1850	164008	36.32	105.20	126.70	2.75 Kg/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 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/Nm3)	CO
Sinter Plant											
SP-2											
SP-2 (M/c-3)	Sintering Machine	100	6	Multi-Cyclone	24 Jul	1752	238200	37.94	104.70		
SP-2 (M/c-4)	Sintering Machine	100	6	Multi-Cyclone	14 Jul	1752	253606	48.94	99.70		
SP-2 (M/c-2)	Sintering Machine	100	6	Multi-Cyclone	22 Aug	1822	237846	46.44	83.60		
SP-2 (M/c-3)	Sintering Machine	100	6	Multi-Cyclone	07 Aug	2042	234663	48.16	73.70		
SP-2 (M/c-2)	Sintering Machine	100	6	Multi-Cyclone	07 Sep	1198	230131	40.36	79.00	-	-
SP-2 (M/c-3)	Sintering Machine	100	6	Multi-Cyclone	10 Sep	1729	335514	48.7	98.00	-	-
SP-2 (M/c-4)	Sintering Machine	100	6	Multi-Cyclone	10 Sep	1729	301078	48.78	98.90	-	-
SP-2 (M/c-2)	Sintering Machine	100	6	Multi-Cyclone	14 Oct	2022	235683	48.21	82.30	-	-
SP-2 (M/c-3)	Sintering Machine	100	6	Multi-Cyclone	08 Oct	1808	287083	45.02	112.00	-	-
SP-2 (M/c-4)	Sintering Machine	100	6	Multi-Cyclone	08 Oct	1808	290466	48.62	109.60	-	-
SP-2 (M/c-2)	Sintering Machine	100	6	Multi-Cyclone	18 Nov	2025	253421	47.75	96.30		
SP-2 (M/c-3)	Sintering Machine	100	6	Multi-Cyclone	05 Nov	1503	272622	48.99	93.30		
SP-2 (M/c-4)	Sintering Machine	100	6	Multi-Cyclone	05 Nov	1503	264975	43.41	84.10		
SP-2 (M/c-2)	Sintering	100	6	Multi-	22 Dec	864	239300	49.13	80.50	-	-

	Machine			Cyclone							
SP-2 (M/c-3)	Sintering Machine	100	6	Multi-Cyclone	07 Dec	2146	271875	43.78	96.70	-	-
SP-2 (M/c-4)	Sintering Machine	100	6	Multi-Cyclone	07 Dec	2146	276771	47.25	102.30	-	-
SP-3											
SP-3 (M/c-1)	Sintering Machine	120	7	ESP	15 Jul	3404	515735	45.05	-	-	-
SP-3 (M/c-2)	Sintering Machine	120	7	ESP	09 Jul	8793	542204	46.93	-	-	-
SP-3 (M/c-1)	Sintering Machine	120	7	ESP	31 Aug	6723	514703	20.64	-	-	-
SP-3 (M/c-2)	Sintering Machine	120	7	ESP	13 Aug	5896	492036	48.23	-	-	-
SP-3, M/c-1(Space dedusting)				ESP	14 Aug	-	-	43.00	-	-	-
SP-3 (M/c-1)	Sintering Machine	120	7	ESP	25 Sep	7363	442638	31.86	-	-	-
SP-3 (M/c-2)	Sintering Machine	120	7	ESP	29 Sep	8006	505521	36.43	-	-	-
SP-3, M/c-2(Space dedusting)				ESP	22 Sep	-	-	45.66	-	-	-
SP-3 (M/c-1)	Sintering Machine	120	7	ESP	25 Sep	7363	442638	31.86	-	-	-
SP-3 (M/c-1)	Sintering Machine	120	7	ESP	12 Oct	7728	480253	35.39	-	-	-
SP-3 (M/c-2)	Sintering Machine	120	7	ESP	13 Oct	7742	517133	46.36	-	-	-
SP-3, M/c-1(Space dedusting)				ESP	24 Oct	-	-	42.77	-	-	-
SP-3, M/c-2(Space dedusting)				ESP	24 Oct	-	-	46.67	-	-	-
SP-3 (M/c-1)	Sintering Machine	120	7	ESP	23 Nov	10392	496048	46.73	-	-	-
SP-3 (M/c-2)	Sintering Machine	120	7	ESP	19 Nov	5974	508119	46.41	-	-	-
SP-3 (M/c-1)	Sintering	120	7	ESP	15 Dec	6589	441789	45.73	-	-	-

BHILAI STEEL PLANT July to Dec 2020

	Machine										
SP-3 (M/c-2)	Sintering Machine	120	7	ESP	18 Dec	3985	541993	48.70	-	-	-
RMP-2											
RK	Rotary Kiln	60	2	Bag Filter	15 Jul	77	51577	41.93	66.5	-	-
RK	Rotary Kiln	60	2	Bag Filter	19 Aug	112	48636	45.92	71.60	-	-
RK	Rotary Kiln	60	2	Bag Filter	14 Sep	115	51593	35.10	66.20	-	-
RK	Rotary Kiln	60	2	Bag Filter	02 Oct	122	52177	43.59	57.30	-	-
RK	Rotary Kiln	60	2	Bag Filter	12 Nov	118	53012	47.42	54.85	-	-
RK	Rotary Kiln	60	2	Bag Filter	12 Dec	242	57808	47.94	56.70	-	-
TPP/CPP											
Boiler 1	Boiler	80	4.3	ESP	08 Jul	2080	116596	46.13	109.30	116.00	-
Boiler 2	Boiler	80	4.3	ESP	08 Jul	1835	116790	42.98	110.90	114.60	-
Boiler 3	Boiler	80	4.3	Wet Scrubber	13 Jul	1760	87878	37.96	104.80	110.00	-
Boiler 4	Boiler	80	4.3	Wet Scrubber	13 Jul	1670	85032	47.97	96.70	116.40	-
Boiler 5	Boiler	80	4.3	ESP	16 Jul	1880	123298	44.02	98.70	114.00	
Boiler 1	Boiler	80	4.3	ESP	10 Aug	2370	117959	47.70	110.00	112.50	-
Boiler 3	Boiler	80	4.3	Wet Scrubber	18 Aug	1755	87318	47.30	96.30	103.50	-
Boiler 4	Boiler	80	4.3	Wet Scrubber	18 Aug	1800	87251	46.95	98.75	107.10	-
Boiler 5	Boiler	80	4.3	ESP	24 Aug	2000	112448	48.61	82.40	96.80	-
Boiler 6	Boiler	80	4.3	ESP	24 Aug	640	324106	38.54	80.60	92.00	
Boiler 1	Boiler	80	4.3	ESP	14 Sep	1315	116907	47.98	109.70	115.40	-
Boiler 3	Boiler	80	4.3	Wet Scrubber	08 Sep	1855	84492	34.72	94.80	102.90	-
Boiler 4	Boiler	80	4.3	Wet Scrubber	08 Sep	1953	81369	31.56	102.10	110.40	-
Boiler 5	Boiler	80	4.3	ESP	16 Sep	2935	121158	47.38	108.30	116.10	-

BHILAI STEEL PLANT July to Dec 2020

Boiler 6	Boiler	80	4.3	ESP	16 Sep	1580	339984	37.31	82.00	88.90	-
Boiler 1	Boiler	80	4.3	ESP	21 Oct	2025	119587	46.09	101.60	125.00	-
Boiler 2	Boiler	80	4.3	Wet Scrubber	21 Oct	1600	117649	46.21	98.70	118.50	-
Boiler 3	Boiler	80	4.3	Wet Scrubber	06 Oct	2255	88760	36.34	109.30	118.60	-
Boiler 4	Boiler	80	4.3	Wet Scrubber	06 Oct	2255	88999	47.59	110.60	122.00	
Boiler 5	Boiler	80	4.3	ESP	23 Oct	2075	118392	49.09	112.00	128.40	-
Boiler 6	Boiler	80	4.3	ESP	29 Oct	1480	324286	38.35	86.30	92.60	-
Boiler 1	Boiler	80	4.3	ESP	24 Nov	1460	115935	48.99	76.90	88.00	-
Boiler 2	Boiler	80	4.3	Wet Scrubber	24 Nov	2375	118143	46.09	72.65	83.70	-
Boiler 3	Boiler	80	4.3	Wet Scrubber	11 Nov	2685	84400	48.59	89.30	96.70	-
Boiler 4	Boiler	80	4.3	Wet Scrubber	11 Nov	2590	84231	47.87	105.00	114.30	
Boiler 5	Boiler	80	4.3	ESP	25 Nov	2155	122231	34.46	85.30	95.30	-
Boiler 6	Boiler	80	4.3	ESP	25 Nov	1600	337484	39.64	87.30	90.80	-
Boiler 1	Boiler	80	4.3	ESP	17 Dec	2500	116372	47.84	79.80	86.40	-
Boiler 2	Boiler	80	4.3	ESP	17 Dec	2325	115182	48.35	76.60	85.80	-
Boiler 3	Boiler	80	4.3	Wet Scrubber	11 Dec	2270	82680	44.64	103.60	112.80	-
Boiler 4	Boiler	80	4.3	Wet Scrubber	11 Dec	2189	82591	41.15	98.70	108.60	-
Boiler 5	Boiler	80	4.3	ESP	30 Dec	2185	119268	36.51	112.50	120.60	-
Boiler 6	Boiler	80	4.3	ESP	21 Dec	1620	337903	37.50	91.60	97.30	-

BHILAI STEEL PLANT FUGITIVE EMISSION STATUS JULY to DECEMBER

Fugitive Emissions Status Month-July

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/m3 (4000)	SO_2 (200)	NOx (150)	Pb* (2)	CO (5000)	BaP**	Remarks*
1	Coke Oven area	In front of Batt.-1		03 Jul -10:25-10:30	1508	-	-	-	-	990**	Coke Oven area
2	Sinter Plant	SP-II (Near Exhauster Area)		14 Jul -09:55-10:00	1613	-	-	-	-	-	Sinter Plant
3	Blast Furnace	BF-1, Near Chimney		27 Jul -09:45-12:15	623	25.76	47.06	0.165*	920*	271**	Blast Furnace
4	Steel Melting Shop-2	In front of LD Converter		18 Jul -08:15-11:15	1008	34.60	54.87	0.103*	1204*	162**	Steel Melting Shop-2
5	Thermal Power Plant-1	Near Boiler-1 & 2		08 Jul -10:05-10:10	1511	-	-	-		-	Thermal Power Plant-1
6	Lime dolomite plant- 1	RMP-1 (Entrance)		25 Jul -10:35-11:40	677	-	-	-		-	Lime dolomite plant-1
7	Lime dolomite plant-2	RMP-2 (Near welfare building)		25 Jul -10:45-10:50	1386	-	-	-		-	Lime dolomite plant-2

NT- not Traceable

Note : *** Heavy metal analysis & CO results submitted by RDCIS (Sample collected in June-2020)**
**** PAH not yet provided by RDCIS hence the earlier readings are repeated.**

Fugitive Emissions Status Month- August

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/m3 (4000)	SO_2 (200)	NOx (150)	Pb* (2)	CO (5000)	BaP**	Remarks*
1	Coke Oven area	In front of Batt.-4		05 Aug -10:55-11:00	1068	-	-	-	-	300**	Coke Oven area
2	Sinter Plant	SP-II (Near Exhauster Area)		07 Aug -11:10-11:15	1152	-	-	-	-	-	Sinter Plant
3	Blast Furnace	BF # 7, Near Hearth area		25 Aug -08:30-12:30	405.65	25.76	49.10	0.165*	-	-	Blast Furnace
4	Steel Melting Shop-2	LF-1, Near Chimney		21 Aug -08:00-11:00	1054	38.60	52.60	0.103*	-	-	Steel Melting Shop-2
5	Thermal Power Plant-1	Near Boiler-1		10 Aug -10:55-11:00	1127	-	-	-		-	Thermal Power Plant-1
6	Lime dolomite plant- 1	RMP-1 (Entrance)		19 Aug -11:05-11:10	653	-	-	-		-	Lime dolomite plant- 1
7	Lime dolomite plant-2	RMP-2 (Near welfare building)		19 Aug -11:35-11:40	1124	-	-	-		-	Lime dolomite plant-2

NT- not Traceable

Note : * Heavy metal analysis & CO results submitted by RDCIS (Sample collected in June-2020)

**** PAH monitoring done by RDCIS in July 2020.**

BHILAI STEEL PLANT FUGITIVE EMISSION STATUS JULY to DECEMBER

Fugitive Emissions Status Month-September

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** 2000ng/m^3	Remarks*
1	Coke Oven area	In front of Batt.-4		28 Sep -01:15-01:20	1481	-	-	-	-	300 ng/m^3**	
2	Sinter Plant	SP-II (Near Exhauster Area)		28 Sep -11:05-11:10	1673	-	-	-	-	-	***Norms as per GSR 277 (E) dtd 30/03/2012***
3	Blast Furnace	BF # 1, (cast house area)		23 Sep -09:40-12:00	315	31.00	47.40	0.165*	-	-	-
4	Steel Melting Shop-2	Near LF-1		11 Sep -08:30-11:40	1341	39.60	48.60	0.103*	-	-	***Norms as per GSR 277 (E) dtd 30/03/2012***
5	Thermal Power Plant-1	Near Boiler-1		19 Sep -12:00-12:05	1157	-	-	-		-	***Norms as per GSR 277 (E) dtd 30/03/2012***
6	Lime dolomite plant- 1	RMP-1 (Entrance)		15 Sep -11:55-12:00	720	-	-	-		-	-
7	Lime dolomite plant-2	RMP-2 (Near welfare building)		14 Sep -11:55-12:00	1144	-	-	-		-	-

NT- not Traceable

Note : * Heavy metal analysis & CO results submitted by RDCIS (Sample collected in June-2020)

**** BaP monitoring done by RDCIS in May 2020 and result submitted in August 2020.**

BHILAI STEEL PLANT FUGITIVE EMISSION STATUS JULY to DECEMBER

Fugitive Emissions Status Month - October

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** 2000ng/m^3	Remarks*
1	Coke Oven area	In front of Batt.-9		01 Oct -11:25-11:30	1943	-	-	-	-	300ng/m^3**	Norms as per GSR 277 (E) dtd 30/03/2012
2	Sinter Plant	SP-II (Near Exhauster Area)		08 Oct -11:55-12:00	1739	-	-	-	-	-	-
3	Blast Furnace	BF # 1, (cast house area)		26 Oct -09:00-11:00	640	36.20	39.60	0.165*	-	-	-
4	Steel Melting Shop-2	Near Ferro Alloy area		09 Oct -10:00-12:00	738.2	38.50	41.60	0.103*	-	-	***Norms as per GSR 277 (E) dtd 30/03/2012***
5	Thermal Power Plant-1	Near Boiler-5		23 Oct -12:15-12:20	1172	-	-	-		-	***Norms as per GSR 277 (E) dtd 30/03/2012***
6	Lime dolomite plant- 1	RMP-1 (Entrance)		03 Oct -12:25-12:30	993	-	-	-		-	-
7	Lime dolomite plant-2	RMP-2 (Near welfare building)		02 Oct -12:40-12:45	1241	-	-	-		-	-

NT- not Traceable

Note : * Heavy metal analysis& CO results submitted by RDCIS (Sample collected in June-2020)

**** BaPmonitoring done by RDCIS in May 2020 and result submitted in August 2020.**

BHILAI STEEL PLANT FUGITIVE EMISSION STATUS JULY to DECEMBER

Fugitive Emissions Status Month- November

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** 2000ng/m^3	Remarks*
1	Coke Oven area	In front of Batt.-9		02 Nov -11:55-12:55	1658	-	-	-	-	300 ng/m^{3**}	Norms as per GSR 277 (E) dtd 30/03/2012
2	Sinter Plant	SP-II (Near Exhauster Area)		05 Nov -10:45-10:50	1068	-	-	-	-	-	-
3	Blast Furnace	BF # 1, (cast house area)		30 Nov -08:25-12:25	716	35.65	41.06	0.165*	-	-	-
4	Steel Melting Shop-2	Near Ferro Alloy area		21 Nov -08:15-12:00	1012	38.60	42.60	0.103*	-	-	***Norms as per GSR 277 (E) dtd 30/03/2012***
5	Thermal Power Plant-1	Near Boiler-5		11 Nov -11:55-12:00	1086	-	-	-		-	***Norms as per GSR 277 (E) dtd 30/03/2012***
6	Lime dolomite plant- 1	RMP-1 (Entrance)		13 Nov -11:55-12:00	953	-	-	-		-	-
7	Lime dolomite plant-2	RMP-2 (Near welfare building)		12 Nov -12:10-12:15	1208	-	-	-		-	-

NT- not Traceable

Note : * Heavy metal analysis & CO results submitted by RDCIS (Sample collected in June-2020)

**** BaP monitoring done by RDCIS in May 2020 and result submitted in August 2020.**

BHILAI STEEL PLANT FUGITIVE EMISSION STATUS JULY to DECEMBER

Fugitive Emissions Status Month- December

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** 2000ng/m^3	Remarks*
1	Coke Oven area	In front of Batt.-11		05 Dec -08:10-12:00	1733	-	-	1	-	300 ng/m^3**	Norms as per GSR 277 (E) dtd 30/03/2012
2	Sinter Plant	SP-II (Near Exhauster Area)		07 Dec -08:25-12:30	1763	-	-	2	-	-	-
3	Blast Furnace	BF # 6, Near Way bridge		24 Dec -08:30-12:30	1093	38.60	44.70	3	-	-	-
4	Steel Melting Shop-2	LF-1, Near Emergency control centre room ground floor		10 Dec -10:15-12:30	1122	42.50	60.82	4	-	-	***Norms as per GSR 277 (E) dtd 30/03/2012***
5	Thermal Power Plant-1	Near Boiler-1 & 2		17 Dec -08:30-12:30	1550	-	-	5		-	***Norms as per GSR 277 (E) dtd 30/03/2012***
6	Lime dolomite plant- 1	RMP-1 (Entrance)		14 Dec -08:40-12:00	953	-	-	6		-	-
7	Lime dolomite plant-2	RMP-2 (Near welfare building)		12 Dec -08:05-12:00	1570	-	-	7		-	-

NT- not Traceable

Note : * Heavy metal analysis & CO results submitted by RDCIS (Sample collected in June-2020)

**** BaP monitoring done by RDCIS in May 2020 and result submitted in August 2020.**

AMBIENT AIR QUALITY														
Month-July														
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_6H_{6**}
		Norms	24 hrs	60	100	80	80	400	4000	-	180	1	-	-	-
			Annual	40	60	50	40	100	4	1	100	0.5	6	20	5
	Unit	$\mu g/m^3$											ng/m^3		
1	Civic Centre			24.82	49.31	14.07	14.63	1.2	0.37	0.38	7.52	0.046	-	0.021	0.30
2	Ispat Bhavan			9.74	22.01	4.41	14.73	0.51	0.5	-	-	0.100	-	0.010	NA
3	Rail Mill			Under Maintenance								0.058	-	0.016	
4	OP-2			Under Maintenance								0.110	-	0.013	

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

* Not done regularly. NT- not Traceable

** under maintenance

*** Heavy metal analysis & CO results submitted by RDCIS (Sample collected in June-2020)**

**** PAH not yet provided by RDCIS hence the earlier readings are repeated.**

AMBIENT AIR QUALITY

Month-August

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_6H_{6**}
		Norms	24 hrs	60	100	80	80	400	4000	-	180	1	-	-	-
			Annual	40	60	50	40	100	4	1	100	0.5	6	20	5
	Unit	$\mu g/m^3$											ng/m^3		
1	Civic Centre			23.54	46.50	12.87	13.12	-	-	NT	-	0.046	NT	0.021	
2	Ispat Bhavan			6.86	19.21	3.45	10.00	2.96	0.48	NT	-	0.100	NT	0.010	
3	Rail Mill			Under Maintenance								0.058	NT	0.016	
4	OP-2			Under Maintenance								0.110	NT	0.013	

Note: if monitoring of CO is done on 8 hourly basis, then Norm is 2000 $\mu g/m^3$. Otherwise, norm is 4000 $\mu g/m^3$, *when* monitoring of CO is done for 1 hr.
* Not done regularly. NT- not Traceable

AMBIENT AIR QUALITY															
Month-September															
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_6H_{6**}**
		Norms	**24 hrs**	**60**	**100**	**80**	**80**	**400**	**4000**	**-**	**180**	**1**	**-**	**-**	**-**
			Annual	**40**	**60**	**50**	**40**	**100**	**4**	**1**	**100**	**0.5**	**6**	**20**	**5**
	Unit	***µg/m³***											***ng/m³***		
1	**Civic Centre**			23	47.21	12.28	12.92	1.06	430	NT	-	0.046	NT	0.021	
2	**Ispat Bhavan**			18.78	33.65	9.32	14.7	0.51	450	NT	-	0.100	NT	0.010	
3	**Rail Mill**			20.61	41.43	10.88	13.48	1.71	380	NT	-	0.058	NT	0.016	
4	**OP-2**			19.91	Unde maint	14.99	18.03	2.28	320	NT	-	0.110	NT	0.013	

Note: if monitoring of CO is done on 8 hourly basis, then Norm is 2000 *µg/m³*. Otherwise, norm is 4000 *µg/m³, when* monitoring of CO is done for 1 hr.

* Not done regularly. NT- not Traceable

AMBIENT AIR QUALITY														
Month-October														
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_6H_{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	$\mu g/m^3$											ng/m^3		
1	Civic Centre			28.32	52.58	15.67	17.20	2.63	520	NT	-	0.046	NT	0.021	
2	Ispat Bhavan			15.34	56.31	5.29	14.81	1.04	340	NT	-	0.100	NT	0.010	
3	Rail Mill			16.28	58.38	6.28	15.13	1.65	550	NT	-	0.058	NT	0.016	
4	OP-2			38.18	Unde maint	15.36	17.29	2.16	810	NT	-	0.110	NT	0.013	

Note: if monitoring of CO is done on 8 hourly basis, then Norm is 2000$\mu g/m^3$. Otherwise, norm is 4000$\mu g/m^3$, *when* monitoring of CO is done for 1 hr
* Not done regularly. NT- not Traceable

AMBIENT AIR QUALITY														
Month-November														
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_6H_{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	***µg/m³***											***ng/m³***		
1	Civic Centre			21.97	59.98	17.38	16.00	2.97	0.57	NT	15.55	0.046	NT	0.021	0.35
2	OP-2			19.43	65.41	16.36	-	-	0.61	NT	-	0.100	NT	0.010	1.63
3	Rail Mill			21.94	66.32	13.63	14.91	1.66	0.56	NT	28.84	0.058	NT	0.016	3.04
4	Ispat Bhavan			18.45	50.8	8.94	14.91	1.91	0.42	NT	-	0.110	NT	0.013	-

Note: if monitoring of CO is done on 8 hourly basis, then Norm is 2000*µg/m³*. Otherwise, norm is 4000*µg/m³, when* monitoring of CO is done for 1 hr

* Not done regularly. NT- not Traceable

AMBIENT AIR QUALITY														
Month-December														
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_6H_{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	***µg/m³***											***ng/m³***		
1	Civic Centre			28.44	61.24	15.99	16.09	3.14	0.62	NT	15.55	0.046	NT	0.021	0.35
2	OP-2			19.38	47.53	14.37	14.13	1.77	0.57	NT	-	0.100	NT	0.010	1.63
3	Rail Mill			18.40	68.84	16.54	15.20	1.61	0.49	NT	28.84	0.058	NT	0.016	3.04
4	Ispat Bhavan			20.92	54.38	10.52	14.88	1.97	0.51	NT	-	0.110	NT	0.013	-

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

* Not done regularly. NT- not Traceable

FLAG-F

Bhilai Steel Plant Water Pollution Status July to December

Water Pollution Status: 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

Month- July

Date & Time of the sample	Location of the sampling point	Type of treatment provided	Flow rate m3/Hr	Parameters monitored (mg/l, except pH)								Remarks
				pH	TSS	Phenol	Cyanide	BOD	COD	Amm. Nitrogen	O & G	
Norm				**6.0-8.5**	**100 (50 for BF)**	**1**	**0.2**	**30**	**250**	**50**	**10**	
COBP Effluent												
15 Jul, 08:00:00 AM	**Inlet to BOD plant**	Physiochemical & Biological	88	9.48	-	205	11.30	-	4200	737.5	9.70	Treated water used for quenching
15 Jul, 08:25:00 AM	**Outlet to BOD plant**	Physiochemical & Biological	-	7.38	85.5	0.148	0.19	18	235	47.4	2.25	Treated water used for quenching
03 Jul, 09:00:00 AM	**Sinter Plant-2**	Settling Tank	1400	8.32	85	-	-	-	-	-	1.15	Recycled back
03 Jul, 09:15:00 AM	**Steel Melting Shop-2**	Settling Tank	1650	8.4	35	-	-	-	-	-	1.08	Recycled
02 Jul, 09:00:00 AM	**Blast Furnace-RST**	Settling Tank /Cooling Pond	12500	6.72	48	BDL	0.19	-	-	25.20	1.50	Recycled Back
08 Jul, 08:20:00 AM	**Mills (Rail Mill)**	Settling Tank with oil separators	-	7.15	52	-	-	-	-	-	2.15	Recycled Back
16 Jul, 09:30:00 AM	**Plate Mill**	Settling Tank with oil separators	16000	7.72	33	-	-	-	-	-	1.97	Recycled Back

Bhilai Steel Plant Water Pollution Status July to December

Month- August

Date & Time of the sample	Location of the sampling point	Type of treatment provided	Flow rate m3/Hr	Parameters monitored (mg/l, except pH)								Remarks
				pH	TSS	Phenol	Cyanide	BOD	COD	Amm. Nitrogen	O & G	
Norm				**6.0-8.5**	**100 (50 for BF)**	**1**	**0.2**	**30**	**250**	**50**	**10**	
COBP Effluent												
26 Aug, 09:00:00 AM	**Inlet to BOD plant**	Physiochemical & Biological	90	*9.56*	-	238	10.80	-	5200	755.0	14.10	Treated water used for quenching
26 Aug, 09:10:00 AM	**Outlet to BOD plant**	Physiochemical & Biological	-	7.59	87	0.195	0.18	19	245	48.5	2.45	Treated water used for quenching
07 Aug, 09:00:00 AM	**Sinter Plant-2**	Settling Tank	1400	8.3	70	-	-	-	-	-	1.23	Recycled back
07 Aug, 09:10:00 AM	**Steel Melting Shop-2**	Settling Tank	1650	8.1	55	-	-	-	-	-	1.11	Recycled
06 Aug, 09:00:00 AM	**Blast Furnace-RST**	Settling Tank /Cooling Pond	12500	*6.09*	49	BDL	0.20	-	-	33.50	1.46	Recycled Back
08 Aug, 09:00:00 AM	**Mills (Rail Mill)**	Settling Tank with oil separators	-	7.64	43	-	-	-	-	-	2.16	Recycled Back
13 Aug, 09:00:00 AM	**Plate Mill**	Settling Tank with oil separators	16000	7.65	35	-	-	-	-	-	2.21	Recycled Back

Bhilai Steel Plant Water Pollution Status July to December

Month- September

Date & Time of the sample	Location of the sampling point	Type of treatment provided	Flow rate m3/Hr	Parameters monitored (mg/l, except pH)								Remarks
				pH	TSS	Phenol	Cyanide	BOD	COD	Amm. Nitrogen	O & G	
Norm				**6.0-8.5**	**100 (50 for BF)**	**1**	**0.2**	**30**	**250**	**50**	**10**	
COBP Effluent												
22 Sep, 10:00:00 AM	**Inlet to BOD plant**	Physiochemical & Biological	80	9.43	-	212	9.15	-	4732	738.6	12.30	Treated water used for quenching
22 Sep, 10:10:00 AM	**Outlet to BOD plant**	Physiochemical & Biological	-	7.43	89	0.188	0.19	17	237	46.7	2.16	Treated water used for quenching
01 Sep, 08:40:00 AM	**Sinter Plant-2**	Settling Tank	1400	8.45	69	-	-	-	-	-	1.32	Recycled back
01 Sep, 09:00:00 AM	**Steel Melting Shop-2**	Settling Tank	1650	8.30	50	-	-	-	-	-	1.14	Recycled
12 Sep, 08:50:00 AM	**Blast Furnace-RST**	Settling Tank /Cooling Pond	12500	6.38	47	BDL	0.13	-	-	*29.60*	1.44	Recycled Back
04 Sep, 08:35:00 AM	**Mills (Rail Mill)**	Settling Tank with oil separators	-	7.83	40	-	-	-	-	-	3.40	Recycled Back
11 Sep, 09:15:00 AM	**Plate Mill**	Settling Tank with oil separators	16000	7.61	42	-	-	-	-	-	2.73	Recycled Back
	CPP/TPP	Ash Dyke										Recycled Back

Bhilai Steel Plant Water Pollution Status July to December

Month- October

Date & Time of the sample	Location of the sampling point	Type of treatment provided	Flow rate m3/Hr	Parameters monitored (mg/l, except pH)								Remarks
				pH	TSS	Phenol	Cyanide	BOD	COD	Amm. Nitrogen	O & G	
Norm				**6.0-8.5**	**100 (50 for BF)**	**1**	**0.2**	**30**	**250**	**50**	**10**	
COBP Effluent												
28 Oct, 09:30:00 AM	**Inlet to BOD plant**	Physiochemical & Biological	86	***9.42***	-	187	6.20	-	3157	455.3	12.40	Treated water used for quenching
28 Oct, 09:50:00 AM	**Outlet to BOD plant**	Physiochemical & Biological	-	7.66	173	0.325	***0.18***	18	572	***48.75***	2.10	Treated water used for quenching
Shutdown			-	-	-	-	-	-	-	-	-	
02 Oct, 09:00:00 AM	**Sinter Plant-2**	Settling Tank	1400	8.38	45	-	-	-	-	-	1.21	Recycled back
02 Oct, 09:10:00 AM	**Steel Melting Shop-2**	Settling Tank	1650	***8.2***	49	-	-	-	-	-	1.10	Recycled
16 Oct, 08:50:00 AM	**Blast Furnace-RST**	Settling Tank /Cooling Pond	12500	6.65	47	BDL	0.14	-	-	***31.80***	1.41	Recycled Back
08 Oct, 09:00:00 AM	**Mills (Rail Mill)**	Settling Tank with oil separators	-	7.85	54	-	-	-	-	-	2.90	Recycled Back
10 Oct, 08:45:00 AM	**Plate Mill**	Settling Tank with oil separators	16000	7.92	42	-	-	-	-	-	1.41	Recycled Back
	CPP/TPP	Ash Dyke										Recycled Back

Bhilai Steel Plant Water Pollution Status July to December

Month- November

Date & Time of the sample	Location of the sampling point	Type of treatment provided	Flow rate m3/Hr	Parameters monitored (mg/l, except pH)								Remarks
				pH	TSS	Phenol	Cyanide	BOD	COD	Amm. Nitrogen	O & G	
Norm				**6.0-8.5**	**100 (50 for BF)**	**1**	**0.2**	**30**	**250**	**50**	**10**	
COBP Effluent												
26 Nov, 08:35:00 AM	**Inlet to BOD plant**	Physiochemical & Biological	87	***9.56***	-	143	6.20	-	3200	474.8	9.50	Treated water used for quenching
26 Nov, 08:55:00 AM	**Outlet to BOD plant**	Physiochemical & Biological	-	7.47	43	0.278	0.19	11	245	***45***	2.50	Treated water used for quenching
Shutdown			-	-	-	-	-	-	-	-	-	
03 Nov, 10:30:00 AM	**Sinter Plant-2**	Settling Tank	1400	7.46	60	-	-	-	-	-	1.66	Recycled back
03 Nov, 10:15:00 AM	**Steel Melting Shop-2**	Settling Tank	1650	8.31	69	-	-	-	-	-	2.50	Recycled
05 Nov, 09:00:00 AM	**Blast Furnace-RST**	Settling Tank /Cooling Pond	12500	6.93	47	BDL	0.12	-	-	***42.00***	1.62	Recycled Back
06 Nov, 09:20:00 AM	**Mills (Rail Mill)**	Settling Tank with oil separators	-	7.80	50	-	-	-	-	-	2.11	Recycled Back
12 Nov, 08:55:00 AM	**Plate Mill**	Settling Tank with oil separators	16000	7.63	48	-	-	-	-	-	3.85	Recycled Back
	CPP/TPP	Ash Dyke										Recycled Back

Bhilai Steel Plant Water Pollution Status July to December

Month- December

Date & Time of the sample	Location of the sampling point	Type of treatment provided	Flow rate m3/Hr	Parameters monitored (mg/l, except pH)								Remarks
				pH	TSS	Phenol	Cyanide	BOD	COD	Amm. Nitrogen	O & G	
Norm				**6.0-8.5**	**100 (50 for BF)**	**1**	**0.2**	**30**	**250**	**50**	**10**	
COBP Effluent												
16 Dec, 08:45:00 AM	**Inlet to BOD plant**	Physiochemical & Biological	89	***9.67***	-	273	7.10	-	3255	308.5	9.50	Treated water used for quenching
16 Dec, 09:05:00 AM	**Outlet to BOD plant**	Physiochemical & Biological	-	7.31	149	0.193	0.19	10	227	***48.23***	2.00	Treated water used for quenching
Shutdown			-	-	-	-	-	-	-	-	-	
04 Dec, 08:10:00 AM	**Sinter Plant-2**	Settling Tank	1400	***9.00***	60	-	-	-	-	-	2.40	Recycled back
04 Dec, 08:00:00 AM	**Steel Melting Shop-2**	Settling Tank	1650	***10.5***	52	-	-	-	-	-	2.61	Recycled
19 Dec, 08:55:00 AM	**Blast Furnace-RST**	Settling Tank /Cooling Pond	12500	7.31	47	BDL	0.16	-	-	23.90	1.51	Recycled Back
18 Dec, 10:30:00 AM	**Mills (Rail Mill)**	Settling Tank with oil separators	-	7.35	48	-	-	-	-	-	2.15	Recycled Back
05 Dec, 09:45:00 AM	**Plate Mill**	Settling Tank with oil separators	16000	7.39	60	-	-	-	-	-	3.61	Recycled Back
	CPP/TPP	Ash Dyke										Recycled Back

Bhilai Steel Plant Water Pollution Status July to December

Quality of various effluent streams at the Boundary line of the plant
Month -July

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	
06, 13,20,28, 8:00 to 12:30, Grab	Stream – A	SMS I & II, Foundry, PP-1, BF, OP-I, RMP-I, ARS and Plate mill	24.68	7.21	41	*BDL*	*BDL*	16	43	4.64	1.23	
06, 13, 20, 28, 8:00 to 12:30, Grab	Stream – B	MSDS-I, RTS, T&D, and R&SM	24.93	7.29	36	*BDL*	*BDL*	18	50	6.99	2.52	
01, 07, 14, 21, 8:00 to 12:30, Grab	Stream – C	COBPP, SP-II, SP-III, Coke Ovens and Mills	25.28	7.40	63	0.15	0.10	15	49	7.35	1.60	

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**	
06 Jul, 09:00 AM	30 MLD	1150	25	6.80	22	10	19	
20 Jul, 10:20 AM	Bhilai House (Oxi. Pond)	475	24	7.99	52	19	69	
20 Jul, 11:00 AM	Risali (Oxi. Pond)	700	25	7.87	45	23	58	
10 Jul, 08:25 AM	Works area	390	26	7.41	40	16	40	

Bhilai Steel Plant Water Pollution Status July to December

Quality of various effluent streams at the Boundary line of the plant
Month -August

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	
05, 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	27.45	7.45	50	BDL	BDL	18	51	3.50	1.93	
05, 10, 17, 24, 8:00 to 12:30, Grab	Stream – B	MSDS-I, RTS, T&D, and R&SM	27.70	7.24	47	BDL	BDL	19	54	5.13	3.22	
04, 11, 18, 25, 8:00 to 12:30, Grab	Stream – C	COBPP, SP-II, SP-III, Coke Ovens and Mills	25.58	7.81	68	0.22	0.09	19	54	6.64	2.27	

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**	
28 Aug, 11:10 AM	30 MLD	1150	23	7.10	20	8	15	
29 Aug, 08:40 AM	Bhilai House (Oxi. Pond)	475	26	7.90	74	18	46	
29 Aug, 08:00 AM	Risali (Oxi. Pond)	700	26	8.19	79	21	53	
20 Aug, 10:30 AM	Works area	390	26	7.31	40	12	43	

Bhilai Steel Plant Water Pollution Status July to December

Quality of various effluent streams at the Boundary line of the plant
Month - September

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**	
07, 14, 21, 28, 8:00 to 12:30, Grab	Stream – A	SMS I & II, Foundry, PP-1, BF, OP-I, RMP-I, ARS and Plate mill	28.58	7.46	62	BDL	BDL	17	51	4.55	1.65	
07, 14, 21, 28, 8:00 to 12:30, Grab	Stream – B	MSDS-I, RTS, T&D, and R&SM	28.93	7.22	55	BDL	BDL	20	58	10.85	3.20	
08, 14, 23, 29, 8:00 to 12:30, Grab	Stream – C	COBPP, SP-II, SP-III, Coke Ovens and Mills	29.50	8.19	65	0.28	0.18	19	61	21.53	1.89	

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**	
28 Sep, 09:00 AM	30 MLD	1150	27	7.12	25	9	15	
28 Sep, 08:20 AM	Bhilai House (Oxi. Pond)	475	27	8.13	72	21	74	
28 Sep, 08:40 AM	Risali (Oxi. Pond)	700	27	8.12	75	21	60	
18 Sep, 08:15 AM	Works area	390	25	7.82	35	14	56	

Bhilai Steel Plant Water Pollution Status July to December

Quality of various effluent streams at the Boundary line of the plant
Month - October

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	
05, 12, 19, 26, 8:00 to 12:30, Grab	Stream – A	SMS I & II, Foundry, PP-1, BF, OP-I, RMP-I, ARS and Plate mill	27.78	7.47	60	BDL	BDL	15	46	4.19	2.05	
05, 12, 19, 26, 8:00 to 12:30, Grab	Stream – B	MSDS-I, RTS, T&D, and R&SM	27.13	7.22	63	BDL	BDL	18	52	7.31	3.56	
07, 13, 20, 27, 8:00 to 12:30, Grab	Stream – C	COBPP, SP-II, SP-III, Coke Ovens and Mills	28.03	8.23	***89***	0.14	0.11	***19***	54	22.90	2.88	

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**	
05 Oct, 08:45 AM	30 MLD	1150	27	6.44	36	9	13	
26 Oct, 11:00 AM	Bhilai House (Oxi. Pond)	475	26	8.16	81	21	65	
19 Oct, 10:30 AM	Risali (Oxi. Pond)	700	26	8.13	78	24	60	
09 Oct, 08:55 AM	Works area	390	27	7.94	42	21	51	

Bhilai Steel Plant Water Pollution Status July to December

Quality of various effluent streams at the Boundary line of the plant
Month -November

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	
02, 09, 18, 23, 8:00 to 12:30, Grab	Stream – A	SMS I & II, Foundry, PP-1, BF, OP-I, RMP-I, ARS and Plate mill	26.63	7.62	*53*	***BDL***	***BDL***	14	44	3.42	1.68	
02, 09, 18, 23, 8:00 to 12:30, Grab	Stream – B	MSDS-I, RTS, T&D, and R&SM	26.00	7.41	*62*	***BDL***	***BDL***	17	53	6.55	3.44	
03, 10, 17, 24, 8:00 to 12:30, Grab	Stream – C	COBPP, SP-II, SP-III, Coke Ovens and Mills	26.08	8.01	*84*	*0.16*	*0.09*	17	53	8.99	2.43	

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**	
02 Nov, 09:00 AM	30 MLD	1150	27	7.01	32	10	14	
11 Nov, 10:30 AM	Bhilai House (Oxi. Pond)	475	28	8.19	77	22	82	
11 Nov, 11:00 AM	Risali (Oxi. Pond)	700	27	8.27	80	23	76	
13 Nov, 09:25 AM	Works area	390	27	7.82	41	21	58	

Bhilai Steel Plant Water Pollution Status July to December

Quality of various effluent streams at the Boundary line of the plant
Month - December

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	
07, 14, 21, 28, 8:00 to 12:30, Grab	Stream – A	SMS I & II, Foundry, PP-1, BF, OP-I, RMP-I, ARS and Plate mill	25.38	7.68	49	***BDL***	***BDL***	13	41	2.68	2.15	
07, 14, 21, 28, 8:00 to 12:30, Grab	Stream – B	MSDS-I, RTS, T&D, and R&SM	25.35	7.75	54	***BDL***	***BDL***	18	55	7.91	3.85	
02, 08, 15, 22, 8:00 to 12:30, Grab	Stream – C	COBPP, SP-II, SP-III, Coke Ovens and Mills	25.10	8.42	***80***	0.16	0.07	18	57	7.03	1.70	

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 Dec, 10:10 AM	30 MLD	1150	27	7.12	22	10	12	
08 Dec, 12:00 PM	Bhilai House (Oxi. Pond)	475	25	8.22	87	19	65	
10 Dec, 11:00 AM	Risali (Oxi. Pond)	700	25	8.18	81	24	59	
12 Dec, 09:45 AM	Works area	390	25	7.69	40	15	42	

Bhilai Steel Plant Water Pollution Status July to December

FLAG-G

Bhilai Steel Plant Noise Pollution Status July to December

Noise Pollution Control Status Month - July

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)	31-Jul	5 m	Air tight control Room	63.7	2 Minute	
Blast Furnace-7(Control Room)	17-Jul	5 m	Acoustic Room	64.0	2 Minute	
Mills (Rolling / forgoing) Rail Mill	22-Jul	5 m	Acoustic pulpit	83.6	2 Minute	
TPP/CPP (Turbines-3) (Control Room)	08-Jul	5 m	Acoustic cabins	67.7	2 Minute	
Blast Furnace-7(Control Room)	17-Jul	5 m	Acoustic Room	64.0	2 Minute	
SP-2, (M/c-4) Operator's room	14-Jul	5 m	Acoustic Room	65.9	2 Minute	
Coke-oven area (Batt.-1) (Control Room)	03-Jul	5 m	Air Tight control Room	67.6	2 Minute	
Others						

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

Bhilai Steel Plant Noise Pollution Status July to December

Noise Zone	Noise Level		Unit: dB (A)
	Standard	Day Time	Night time
Industrial Area (at boundary of plant)			
Near OP-2	75	53.5	50.6
Near Joratarai Gate	75	54.1	52.7
Near Main Gate	75	62.4	59.5
Near Khursipar Gate	75	67.1	64.9
Commercial Area			
Sector-05 (Market area)	65 Day & 55 Night	46.4	50.0
Sector-06 (Near 'B' Market)	65 Day & 55 Night	43.4	48.0
Sector-09 (Goal Market)	65 Day & 55 Night	47.0	49.0
Maroda Sector (BSP Market)	65 Day & 55 Night	56.5	43.8
Risali Sector (BSP Market)	65 Day & 55 Night	62.3	53.6
Residential Area			
Sector-01 (Street No. - 23)	55 Day & 45 Night	48.2	41.2
Sector-05 (Street No. - 32)	55 Day & 45 Night	44.0	42.0
Sector-07 (Street No. - 17)	55 Day & 45 Night	48.2	40.0
Sector-08 (Street No. - 05)	55 Day & 45 Night	49.7	43.5
Sector-10 (Street No. - 25)	55 Day & 45 Night	46.9	43.2
Silence Area			
Sector-02 (English Medium Middle School)	50 Day & 40 Night	42.3	34.0
Sector-05 (Girls Higher Secondry School)	50 Day & 40 Night	43.0	32.0
Sector-07 (English Medium Middle School)	50 Day & 40 Night	44.8	36.9
Risali Sector (Aadarsh Hindi Medium Middle School)	50 Day & 40 Night	46.2	35.6
Maroda Sector (Estate Court)	50 Day & 40 Night	48.4	38.7

Noise Pollution Control Status Month - August

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)	26-Aug	5 m	Air tight control Room	71.2	2 Minute	
Blast Furnace-7(Control Room)	25-Aug	5 m	Acoustic Room	66.0	2 Minute	
Mills (Rolling / forgoing) Rail Mill	15-Aug	5 m	Acoustic pulpit	81.6	2 Minute	
TPP/CPP (Turbines-4) (Control Room)	10-Aug	5 m	Acoustic cabins	68.0	2 Minute	
SP-2, (M/c-3) Operator's room	07-Aug	5 m	Acoustic Room	66.4	2 Minute	
Coke-oven area (Batt.-9) (Control Room)	04-Aug	5 m	Air Tight control Room	68.3	2 Minute	
Others						

* Noise level map of the plant may be attached along

Bhilai Steel Plant Noise Pollution Status July to December

with the report

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	53.5	50.6
Near Joratarai Gate	75	54.1	52.7
Near Main Gate	75	62.4	59.5
Near Khursipar Gate	75	67.1	64.9
Commercial Area			
Sector-05 (Market area)	65 Day & 55 Night	46.4	50.0
Sector-06 (Near 'B' Market)	65 Day & 55 Night	43.4	48.0
Sector-09 (Goal Market)	65 Day & 55 Night	47.0	49.0
Maroda Sector (BSP Market)	65 Day & 55 Night	56.5	43.8
Risali Sector (BSP Market)	65 Day & 55 Night	62.3	53.6
Residential Area			
Sector-01 (Street No. - 23)	55 Day & 45 Night	48.2	41.2
Sector-05 (Street No. - 32)	55 Day & 45 Night	44.0	42.0
Sector-07 (Street No. - 17)	55 Day & 45 Night	48.2	40.0
Sector-08 (Street No. - 05)	55 Day & 45 Night	49.7	43.5
Sector-10 (Street No. - 25)	55 Day & 45 Night	46.9	43.2
Silence Area			

Sector-02 (English Medium Middle School)	50 Day & 40 Night	42.3	34.0
Sector-05 (Girls Higher Secondry School)	50 Day & 40 Night	43.0	32.0
Sector-07 (English Medium Middle School)	50 Day & 40 Night	44.8	36.9
Risali Sector (Aadarsh Hindi Medium Middle School)	50 Day & 40 Night	46.2	35.6
Maroda Sector (Estate Court)	50 Day & 40 Night	48.4	38.7

Noise Pollution Control Status Month - September

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-Sep	5 m	Air tight control Room	69.8	2 Minute	
Blast Furnace-7(Control Room)	19-Sep	5 m	Acoustic Room	67.9	2 Minute	
Mills (Rolling / forgoing) Rail Mill	29-Sep	5 m	Acoustic pulpit	84.8	2 Minute	
TPP/CPP (Turbines-3) (Control Room)	08-Sep	5 m	Acoustic cabins	67.8	2 Minute	
SP-2, (M/c-2) Operator's room	07-Sep	5 m	Acoustic Room	66.9	2 Minute	

Bhilai Steel Plant Noise Pollution Status July to December

Coke-oven area (Batt.-1) (Control Room)	03-Sep	5 m	Air Tight control Room	67.9	2 Minute	
Others						

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

Noise Zone	Noise Level		Unit: dB (A)
	Standard	Day Time	Night time
Industrial Area (at boundary of plant)			
Near OP-2	75	53.5	50.6
Near Joratarai Gate	75	54.1	52.7
Near Main Gate	75	62.4	59.5
Near Khursipar Gate	75	67.1	64.9
Commercial Area			
Sector-05 (Market area)	65 Day & 55 Night	46.4	50.0
Sector-06 (Near 'B' Market)	65 Day & 55 Night	43.4	48.0
Sector-09 (Goal Market)	65 Day & 55 Night	47.0	49.0
Maroda Sector (BSP Market)	65 Day & 55 Night	56.5	43.8
Risali Sector (BSP Market)	65 Day & 55 Night	62.3	53.6
Residential Area			
Sector-01 (Street No. - 23)	55 Day & 45 Night	48.2	41.2
Sector-05 (Street No. - 32)	55 Day & 45 Night	44.0	42.0

Sector-07 (Street No. - 17)	55 Day & 45 Night	48.2	40.0
Sector-08 (Street No. - 05)	55 Day & 45 Night	49.7	43.5
Sector-10 (Street No. - 25)	55 Day & 45 Night	46.9	43.2
Silence Area			
Sector-02 (English Medium Middle School)	50 Day & 40 Night	42.3	34.0
Sector-05 (Girls Higher Secondry School)	50 Day & 40 Night	43.0	32.0
Sector-07 (English Medium Middle School)	50 Day & 40 Night	44.8	36.9
Risali Sector (Aadarsh Hindi Medium Middle School)	50 Day & 40 Night	46.2	35.6
Maroda Sector (Estate Court)	50 Day & 40 Night	48.4	38.7

Noise Pollution Control Status Month - October

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)	30-Oct	5 m	Air tight control Room	67.9	2 Minute	
Blast Furnace-6(Control Room)	17-Oct	5 m	Acoustic Room	69.6	2 Minute	
Mills (Rolling / forgoing) Rail Mill	28-Oct	5 m	Acoustic pulpit	***72.6***	2 Minute	
TPP/CPP (Turbines-4) (Control Room)	6-Oct	5 m	Acoustic cabins	68.3	2 Minute	
SP-2, (M/c-3) Operator's room	8-Oct	5 m	Acoustic Room	68.4	2 Minute	

Coke-oven area (Batt.-9) (Control Room)	1-Oct	5 m	Air Tight control Room	65.0	2 Minute	
Others						

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

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	54.7	51.6
Near Joratarai Gate	75	56.8	54.2
Near Main Gate	75	58.7	56.3
Near Khursipar Gate	75	68.2	65
Commercial Area			
Sector-05 (Market area)	65 Day & 55 Night	62.5	52.6
Sector-06 (Near 'B' Market)	65 Day & 55 Night	54.0	52.7
Sector-09 (Goal Market)	65 Day & 55 Night	49.9	47.6
Maroda Sector (BSP Market)	65 Day & 55 Night	50.8	49.8

Bhilai Steel Plant Noise Pollution Status July to December

Risali Sector (BSP Market)	65 Day & 55 Night	54.8	51.4
Residential Area			
Sector-01 (Street No. - 23)	55 Day & 45 Night	48.6	44.1
Sector-05 (Street No. - 32)	55 Day & 45 Night	52.1	43.2
Sector-07 (Street No. - 17)	55 Day & 45 Night	50.7	42.0
Sector-08 (Street No. - 05)	55 Day & 45 Night	50.1	43.9
Sector-10 (Street No. - 25)	55 Day & 45 Night	53.3	43.6
Silence Area			
Sector-02 (English Medium Middle School)	50 Day & 40 Night	49.0	38.2
Sector-05 (Girls Higher Secondry School)	50 Day & 40 Night	48.2	37.0
Sector-07 (English Medium Middle School)	50 Day & 40 Night	48.5	38.3
Risali Sector (Aadarsh Hindi Medium Middle School)	50 Day & 40 Night	48.0	37.5
Maroda Sector (Estate Court)	50 Day & 40 Night	47.5	38.5

- **Noise Monitoring in township area done in the**

Bhilai Steel Plant Noise Pollution Status July to December

Noise Pollution Control Status Month - November

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)	25-Nov	5 m	Air tight control Room	66.4	2 Minute	
Blast Furnace-6(Control Room)	07-Nov	5 m	Acoustic Room	69.9	2 Minute	
Mills (Rolling / forgoing) Rail Mill	28-Nov	5 m	Acoustic pulpit	***80.9***	2 Minute	
TPP/CPP (Turbines-3) (Control Room)	07-Nov	5 m	Acoustic cabins	67.6	2 Minute	
SP-2, (M/c-3) Operator's room	05-Nov	5 m	Acoustic Room	69.8	2 Minute	
Coke-oven area (Batt.-5) (Control Room)	06-Nov	5 m	Air Tight control Room	66.6	2 Minute	
Others						

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

Bhilai Steel Plant Noise Pollution Status July to December

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	56.9	54.5
Near Joratarai Gate	75	63.4	57.7
Near Main Gate	75	62.8	60.2
Near Khursipar Gate	75	64.1	61.9
Commercial Area			
Sector-05 (Market area)	65 Day & 55 Night	***62.5***	52.6
Sector-06 (Near 'B' Market)	65 Day & 55 Night	54.0	52.7
Sector-09 (Goal Market)	65 Day & 55 Night	49.9	47.6
Maroda Sector (BSP Market)	65 Day & 55 Night	50.8	49.8
Risali Sector (BSP Market)	65 Day & 55 Night	54.8	51.4
Residential Area			
Sector-01 (Street No. - 23)	55 Day & 45 Night	48.6	44.1
Sector-05 (Street No. - 32)	55 Day & 45 Night	52.1	43.2
Sector-07 (Street No. - 17)	55 Day & 45 Night	50.7	42.0
Sector-08 (Street No. - 05)	55 Day & 45 Night	50.1	43.9
Sector-10 (Street No. - 25)	55 Day & 45 Night	53.3	43.6
Silence Area			
Sector-02 (English Medium Middle School)	50 Day & 40 Night	49.0	38.2
Sector-05 (Girls Higher Secondry School)	50 Day & 40 Night	48.2	37.0
Sector-07 (English Medium Middle School)	50 Day & 40 Night	48.5	38.3
Risali Sector (Aadarsh Hindi Medium Middle School)	50 Day & 40 Night	48.0	37.5

Bhilai Steel Plant Noise Pollution Status July to December

Maroda Sector (Estate Court)	50 Day & 40 Night	47.5	38.5

Bhilai Steel Plant Noise Pollution Status July to December

Noise Pollution Control Status Month - December

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)	31-Dec	5 m	Air tight control Room	67.4	2 Minute	
Blast Furnace-6(Control Room)	24-Dec	5 m	Acoustic Room	68.9	2 Minute	
Mills (Rolling / forgoing) Rail Mill	26-Dec	5 m	Acoustic pulpit	***81.6***	2 Minute	
TPP/CPP (Turbines-3) (Control Room)	11-Dec	5 m	Acoustic cabins	67.9	2 Minute	
SMS-1 (GCP-4) (Control Room)	Shutdown	5 m	Acoustic Control Room	Shutdown	2 Minute	
SP-2, (M/c-3) Operator's room	07-Dec	5 m	Acoustic Room	67.8	2 Minute	
Coke-oven area (Batt.-9) (Control Room)	02-Dec	5 m	Air Tight control Room	68.2	2 Minute	
Others						

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

Bhilai Steel Plant Noise Pollution Status July to December

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	54.5	53.1
Near Joratarai Gate	75	57.8	55.3
Near Main Gate	75	62.9	59.7
Near Khursipar Gate	75	67.4	66.5
Commercial Area			
Sector-05 (Market area)	65 Day & 55 Night	***62.5***	52.6
Sector-06 (Near 'B' Market)	65 Day & 55 Night	54.0	52.7
Sector-09 (Goal Market)	65 Day & 55 Night	49.9	47.6
Maroda Sector (BSP Market)	65 Day & 55 Night	50.8	49.8
Risali Sector (BSP Market)	65 Day & 55 Night	54.8	51.4
Residential Area			
Sector-01 (Street No. - 23)	55 Day & 45 Night	48.6	44.1
Sector-05 (Street No. - 32)	55 Day & 45 Night	52.1	43.2
Sector-07 (Street No. - 17)	55 Day & 45 Night	50.7	42.0
Sector-08 (Street No. - 05)	55 Day & 45 Night	50.1	43.9

Bhilai Steel Plant Noise Pollution Status July to December

Sector-10 (Street No. - 25)	55 Day & 45 Night	53.3	43.6
Silence Area			
Sector-02 (English Medium Middle School)	50 Day & 40 Night	49.0	38.2
Sector-05 (Girls Higher Secondry School)	50 Day & 40 Night	48.2	37.0
Sector-07 (English Medium Middle School)	50 Day & 40 Night	48.5	38.3
Risali Sector (Aadarsh Hindi Medium Middle School)	50 Day & 40 Night	48.0	37.5
Maroda Sector (Estate Court)	50 Day & 40 Night	47.5	38.5

FLAG-H

Status of Additional Environmental improvement Projects being implemented by Different departments of BSP/SAIL

S.no	Dept	Project details	Likely Completion Date	Status
1	SP-II	Installation of ESPs as replacement of Multi-cyclones for all 4nos. of Sinter Machines of SP-II Cost: 43.2 Cr Agency: M/s GEA Process Engineering (India).	March-2021	• ESP-1 &2 Structure assembly is in progress • ESP-3 - Piling completed. four out of eight pile caps completed. Duct support structure foundation pilling is in progress • - ESP-4 - 5 out of 38 piles completed. piling work is in progress. • - ECR Building - Plastering and brickwork completed. Flooring work in progress • ESP-1 erection activity in progress. Side panel & cone erected. , Inlet & outlet plenum erected • ESP-2 structural erection started. Support column steel structure erection completed. Note : Project is delayed due to prevalent COVID pandemic since March-2020 and ensuing problems in deployment of manpower by the contractor.
2	SP-III	Up-gradation of waste gas ESP of SP-III Cost: 6.24 Cr Agency - M/s Unicon Engineers, Coimbatore	December -2020	• All Civil structural works have been completed • ESP upgradation work in progress. Note : Project is delayed due to prevalent COVID pandemic since March-2020 and ensuing problems in deployment of manpower by the contractor.
3	BF	Cast house de-fuming system-BF-7 Cost: 21.67 Crores Agency: M/s.UNI7 Kolkata	December -2020	• Supply of all major equipment completed. • ESP installation job completed • Erection of Chimney in progress. • Final Ducting & duct connecting jobs in progress Note : Project is delayed due to prevalent COVID pandemic since March-2020 and ensuing problems in deployment of manpower by the contractor

S.no	Dept	Project details	Likely Completion Date	Status
4	RMP-II	Stack Emission Control in 2Nos. Vertical Kilns of RMP-2 Cost: 3.95 Cr Agency: M/s Global Enviro Air Systems Pvt. Ltd., Hyderabad	December -2020	• Foundation work of MCC, Compressor room, Bag house & Chimney completed. • Foundation work of ID-Fan-1 completed. &ID-Fan-2 in progress. • ID fan motors, compressors supplied. Note : Project is delayed due to prevalent COVID pandemic since March-2020 and ensuing problems in deployment of manpower by the contractor.
5	SMS-II	Installation of Secondary emission control for 3 converters in SMS-II App. Cost : 265 Crores (Investment proposal underFinalization)	August -2022	• Technical specifications finalized. • Investment proposal initiated.
6	WMD	Water recycling from Outlet-B Cost: 5.3 Crores.	October -2021	• Contract signed on 30/01/2020 • Civil works for Pump House in progress
7	WMD	Water recycling from Outlet-C Cost : 44.8 Crs Agency :M/s Effwa Infra & Research Pvt Ltd., Mumbai	October-2021	• Contract signed on 20/06/2019. • Construction of sludge drying beds completed • Civil work for various structures (Pump Houses, Clarifier Tanks) in progress. More than 70% completed. • Laying of pipe line from ETP to Maroda-1 in progress.