

Poll/Six Mon/FC-2/9-A: 2736  
Date 30.05.2022



To,

**The Member Secretary (IA-II)  
IA Division (Industry I)**

Ministry of Environment, Forest and Climate Change  
Indira Paryavaran Bhavan, Aliganj  
New Delhi - 110 003

Bhandara Road, Warthi, Bhandara - 441 905  
Tel. : 07184 - 285551 To 285555  
Fax : 07184 - 285740  
E-mail : admin@sunflagsteel.com  
Website : www.sunflagsteel.com  
CIN No.: L27100MH1984PLC034003  
GSTIN NO.: 27AACCS3376C1ZH

**Subject : Six Monthly Compliance Report of the Environment Clearance  
(Period 01<sup>st</sup> October - 2021 to 31<sup>st</sup> March 2022)**

**Reference :** 1) MoEF, Govt. Of India Environment Clearance No. F.No.  
J-11011/355/2004-IA II (I) dtd 21.02.2006.  
2) MoEF, Govt. Of India Environment Clearance No. F.No.  
J-11011/355/2004-IA II (I) dtd 02.05.2017.  
3) MoEF, Govt. Of India Environment Clearance No. F.No.  
J-11011/355/2004-IA II (I) dtd 09.11.2020.

**Dear Sir,**

With reference to above EC letter, we are submitting herewith the status of progress & Six monthly compliance report of the conditions stipulated in environmental clearance granted to **M/s Sun flag Iron & Steel Co.Ltd, Bhandara Road (Warthi)**

Hope you will find it in order.

Thanking you.

Yours faithfully.

**For SUNFLAG IRON & STEEL CO.LTD.**

**Ramchandra Dalvi**  
Director-Technical

**Encls : as above**

**CC To :** 1. The In charge, CPCB, Vadodara, Gujrat  
2. The Regional Officer, MPCB, Nagpur  
3. The Sub-Regional Office, MPCB, Bhandara  
4. The Regional Office, MoEFCC, Nagpur

---

**EC COMPLIANCE REPORT  
&  
ENVIRONMENTAL STATUS REPORT  
(October 2021 - March 2022)**

**of**

**SUNFLAG IRON & STEEL CO. LTD.**

Located At

**Village – Eklari, Taluka – Mohadi,  
Dist. – Bhandara.**

***Project Proponent:***



**M/S. SUNFLAG IRON & STEEL CO. LTD.  
Village – Eklari, Taluka – Mohadi, Dist. – Bhandara, 441905**

## SIX MONTHLY COMPLIANCE REPORT

### PART I : DATA SHEET

1	Project Type: River-valley / Mining / Industry /Thermal / Nuclear / Other (Specify)	Integrated steel Plant
2	Name of the Project	M/s Sunflag Iron & Steel Co.Ltd, Located at Village Eklari, Warthi & Sirsi, Taluka : Mohadi, Bhandara, District of Maharashtra.
3	Clearance Letter (s) / OM No. and date	1) J-11011/355/2004- IA.II (I) dated 21.02.2006 2) J-11011/355/2004- IA.II (I) dated 02.05.2017 3) J-11011/355/2004- IA.II (I) dated 09.11.2020
4	Location	
	a. District (s)	Bhandara
	b. State (s)	Maharashtra
	c. Latitude	21°13'30" to 21°14'16" North
	d. Longitude	79°37'11" to 79°38'32" East
5	Address for correspondence,  Address of concerned Project Chief Engineer (with Pin Code & Telephone / Telex / Fax Numbers) & Address of Executive Project Engineer / Manager (with pin code / fax numbers) :	Director-Technical  M/s Sunflag Iron & Steel Co. Ltd., Village – Warthi, Tah.- Mohadi, District – Bhandara , Pin :441905 Maharashtra  Ph. 07184 – 285551 to 285555  Fax – 07184 – 2520360  Email : environment@sunflagsteel.com
6	Salient features	

	a. Of the Project	<p>M/s Sunflag Iron &amp; Steel Co. Ltd. Is integrated Steel Plant having capacity @1.0 Million Tonnes per Annum of high quality special steel in the form of rolled steel products using iron ore. Coal &amp; Coke as basic inputs. The plant has a Direct Reduction Plant (DRP) to produce sponge iron &amp; Mini Blast Furnace (MBF) to produce hot metal for captive consumption in the Steel Melting Shop(SMS). Further liquid metal is converted to Steel Billets &amp; Blooms at Continuous Casting Machine (CCM). The steel billets are taken to Bar &amp; Section Mill (BSM) &amp; Alloy Steel Mill (ASM) and steel Blooms are taken into Blooming mill to produce rolled steel products. The 30 MW Captive Power Plant (CPP) is also installed along with other ancillary/utility plants in the factory.</p> <p>Sunflag Steel caters to the demands of various core sector industries like Automobiles, Railway, Defence, Agriculture Engineering Industry etc.</p> <p>Sunflag Steel is located at 21°13'30" to 21°14'16" North latitude and 79°37'11" to 79°38'32" East longitude. The mean height of the plant site is 273 meters above MSL. Plant is located near Bhandara Road railway station at a distance of 53 km to the E-NE direction of Nagpur. More specifically it is located at about 7.5 km as crow flies from Bhandara in S-SE direction.</p> <p>ted at about 7.5 km as crow flies from Bhandara in S-SE direction.</p> <p>The factory have is certified on ISO 9001:2015, IATF 16949:2016 and TUV-NORD on ISO-14001:2015 and BS OHSAS:45001:2018.</p>
	b. Of the Environmental Management Plan	<p>At DRP air pollution control system provided for producing sponge iron from kiln comprises of 02 nos waste heat recovery boilers and 02 nos Electrostatic Precipitator. 07nos.of bag filters also have been provided to control secondary emission.</p> <p>At SMS combined fume/dust extraction and control system (i.e. The Primary and Secondary Fume Extraction System for SMS had been installed for improving the Dust &amp; Fume extraction) comprising of Water cooled ducts, ACGC, reverse air bag house, pulse jet bag house have provided for electric arc furnace (EAF) and ladle heating furnace (LHF) and Stainless steel converter.</p> <p>At CPP, air pollution control system comprising of devices i.e. economizer, air pre heater, and electrostatic Precipitator have been provided.</p> <p>At MBF, adequate APC system has been provided. From MBF, the dust-laden gas after the dust catcher is cleaned in the GCP. There is two-stage venturi system, first stage provides the pre-cleaning of the gas and the second stage provides the final cleaning of the gas. The Blast Furnace gas after the venturi enters the moisture separator, where the finest water droplets are flung against the scrubber shell and run down into the sump and gas free particle leaves the GCP, the cleaned MBF gas is used at Sinter plant, Reheating furnaces of rolling mills and Hardening furnace.</p>

		<p>At Sinter plant. The system comprises of Suction Ducting, Dust Settling Chamber, Electrostatic Precipitator, ID Fan and Bag Filters.</p> <p>Online continuous ambient air quality monitoring system has been installed at three location.</p> <p>On line continuous monitoring system has been installed in stacks to monitor SPM &amp; SO2 and connected to CPCB server.</p> <p>Online continuous effluent quality monitoring system has been installed and connected to CPCB server.</p>
7	Breakup of the Project area	
	a. Submergence Area: Forest & Non Forest	Project area is located in non forest land.
	b. Others	---
	a. Total Plot Area	200 Hectare
	b. Built- Up area (Including Road)	107.46 Hectare
	c. Open space available	20.54 Hectare
8	<p>Breakup of the Project affected population with enumeration of those losing houses/dwelling units only, agricultural land only, both dwelling units &amp; both dwelling units &amp; agricultural land &amp; landless laborers/artisan</p> <p>a. SC, ST / Adivasis</p> <p>b. Others</p> <p>(Please indicate whether these figures are based on any scientific and systematic survey carried out on only provisional figures, if a survey carried out gives details and year of survey.</p>	<p>Not Applicable, as no population has been affected due to this project.</p> <p>The land required by project had been acquired by The State Industrial &amp; Investment Corporation of Maharashtra (SICOM) and leased to M/s Sunflag Iron &amp; Steel Co.Ltd, Village : Eklari, Tah : Mohadi, Dist : Bhandara, Maharashtra at inception stage, several decades ago.</p>
9	Financial Details	
	a. Project costs as originally planned & subsequent revised estimates and the year of price reference.	<p>Rs.1510 Crores for expansion project, after getting EC vide No.J-11011/355/2004- IA.II (I) dated 02.05.2017. ( Total expenditure on entire Sunflag Steel project is Rs.1326.22 crores for existing plant so far ) Till date the expansion projects completed at cost of Rs.522.23 crores <b>included production units of Pig Iron /Hot</b></p>

---

		<p><b>Metal, Ingot /Billets, Rolled steel Products and Sinter Plant</b> and Rs. 54.93 crores for Modernization and addition in configuration of integrated steel plant [ Modernization-Cryogenic Oxygen plant replaced by VPSA oxygen plant ; Addition- Combustor installation 9.5 MW ( asan alternate to 500 TPD DRI Kiln)] without any change in total production of steel, after getting EC vide No.J-11011/355/2004- IA.II (I) dated 09.11.2020, Total expenditure on completion of this Modernization &amp; addition in configuration at cost of Rs.55.02 crores.</p>
--	--	--

b. Allocations made for Environmental Management Plan with item wise & year wise breakup.	At present under existing unit following expenditure has already been made towards environmental protection, the same are as follows.			
	S.N.	Environmental Component	Capital Cost incurred so far ( Rs. in Lacs)	Recurring Cost per annum ( Rs. in Lacs)
	1.	Air Pollution Control (ESP's, Bag filters, water cooled ducts,GCP, ACGC,Silos, stacks,online monitoring system for ambient and stack)	5651.0	1273
	2.	Water Pollution Control (ETP's, STP, WTP, Neutralization tanks and allied equipments, online effluent monitoring system)	185.0	1030
	4.	Noise Pollution Control (acoustic enclosers,instruments for noise measurement & predictive maintenance, CBM instruments)	25.0	10
	5.	Environment Monitoring and Management (regular monitoring of Environmental parameters as per statutory requirement)	112.0	84
	6	Occupational Health	45	14.74
	7	Green Belt	50.0	33
	8	Online Stack Monitoring System	39.0	20
	9	Online Effluent Monitoring system	11.0	14
	10	Others (Pl. Specify)	20.0	20
c. Benefit Cost Ratio / Internal rate of Return and the year of assessment.	Not Applicable.			
d. Whether (c) includes the cost of Environmental Management as	Not applicable			



	shown in the above.	
	e. Actual expenditure incurred on the Project so far	Rs.1510 Crores approved for expansion project after getting EC vide No.J-11011/355/2004- IA.II (I) dated 02.05.2017. ( Total expenditure on entire existing Sunflag Steel project is Rs. 1848.45 i.e.1326.22 crores for existing project + Rs.522.23 Crores for Expansion project <b>included Pig Iron /Hot Metal, Ingot /Billets, Rolled steel Products and Sinter Plant</b> so far )Till date expansion project completed at cost of Rs.522.23 crores and Rs. 54.93 crores approved for Modernization and addition in configuration of integrated steel plant [ Modernization-Cryogenic Oxygen plant replaced by VPSA oxygen plant ; Addition- Combustor installation 9.5 MW ( as in alternate to 500 TPD DRI Kiln)] without any change in total production of steel, after getting EC vide No.J-11011/355/2004- IA.II (I) dated 09.11.2020, Total expenditure on completion of this Modernization & addition in configuration at cost of Rs.55.02 crores.
	f. Actual expenditure incurred on the Environmental Management Plan so far	Rs. 66.98 Crores including EMP of expansion project.
10	Forest land requirement	Not Required
	a. The status of approval for diversion of Forestland for non-forestry use	Not Applicable
	b. The Status of clearing felling	Not Applicable
	c. The status of compensatory Afforestation programme in the light of actual field experience.	Not Applicable
11.	The status of clear felling in non-forest areas (such as submergence area of reservoir, Approach roads), if any with quantitative information.	Not Applicable
12.	Status of construction	
	a. Date of commencement (Actual and/or Planned)	After obtaining EC vide No.J-11011/355/2004- IA.II (I) dated 02.05.2017, start project activities of following units..Pig Iron/Hot Metal, Ingot/Billets, Rolled steel Products and Sinter Plant and after obtaining EC vide No.J-11011/355/2004- IA.II (I) dated 09.11.2020 for Modernization and addition in configuration of integrated steel plant, start project activities in March-2021.



	b. Date of completion (Actual and/or Planned)	Pig Iron/Hot Metal, Ingot/Billets, Rolled steel Products and Sinter Plant project completed in year 2018-19 and 2019-2020 for Modernization and addition in configuration of integrated steel plant, project activities has been completed in June-2021.
13.	Reasons for the delay if the project is yet to start	Not Applicable
14.	Dates of site visits  a. The dates on which the Project was monitored by Regional Office on previous occasions, if any	05.12.2018 and 11.12.2020
	b. Date of site visit for this monitoring Report	24.03.2022
15.	Details of correspondence with project authorities for obtaining action plan / information on status of compliance to safeguards other than the routine letters for logistic support for site visit.  (The monitoring report may obtain the details of all the letters issued so far but the letter reports may occur only the letters issued subsequently)	Scientist “C” of IRC, MoEFCC, Nagpur visited on 11.12.2020 for monitoring the status of compliance stipulated in Environment Clearance vide letter No.J-11011/355/2004- IA.II (I) dated 02.05.2017 and submitted report to The Member Secretary, IA Division, ( Industry I), MoEFCC, Aligang, Jorbagh Road, NEW DELHI - 110003 and copy to M/s Sunflag Iron & Steel Co.Ltd, Village : Eklari, Bhandara and Scientist “E” & Scientist “D” of IRC, MoEFCC, Nagpur visited on 24.03.2022 for monitoring the status of compliance stipulated in Environment Clearance vide letter No.J-11011/355/2004- IA.II (I) dated 02.05.2017 & 09.11.2020.

---

**EC COMPLIANCE REPORT  
&  
ENVIRONMENTAL STATUS REPORT  
(Oct-2021 -Mar- 2022)**

**of**

**SUNFLAG IRON & STEEL CO. LTD.**

Located At

**Village – Eklari, Taluka – Mohadi,  
Dist. – Bhandara.**

***Project Proponent:***



**M/S. SUNFLAG IRON & STEEL CO. LTD.  
Village – Eklari, Taluka – Mohadi, Dist. – Bhandara, 441905**

---

## 1.0 PREAMBLE

### 1.1 Introduction

Sunflag Iron & Steel Co. Ltd. (Sunflag Steel) has established state-of the-art special Integrated Steel Plant in Bhandara District of Maharashtra State (India) in the year 1989 in technical collaboration with Mannesmann Demag and Krupp, West Germany. This factory is one of the most modern deploying state-of-the-art technologies which won acclaim in the International Exhibition of Steel Plant Equipment & Technology at Dusseldorf (West Germany). Pollution control systems installed for the various sources at the factory are also state-of-the-art. For the last several years, the factory is certified on ISO 9001:2015, IATF 16949:2016 and TUV-NORD on ISO-14001:2015 and BS OHSAS:45001:2018.

Sunflag Steel caters to the demands of various core sector industries like Automobiles, Railways, Defense, Agriculture, Engineering Industry etc.

Sunflag Steel is located at 21<sup>0</sup>14'5" North latitude and 79<sup>0</sup>37'50" East longitude. The mean height of the plant site is 273 meters above MSL. The Sunflag Iron & Steel Co. Ltd. is located near Bhandara Road railway station at a distance of 53 km to the E-NE direction of Nagpur. More specifically it is located at about 7.5 km as crow flies from Bhandara in S-SE direction. In the year 2006, MoEFCC has granted for the expansion of the existing integrated steel plant from existing 0.20 million TPA to 0.50 Million TPA. In the year 2017, MoEFCC has granted for the expansion of the existing integrated steel plant from existing 0.5 million TPA to 1.0 Million TPA

At present, this Integrated Steel Plant has a capacity to manufacture 1.0 Million TPA of high quality special steel in the form of rolled steel products using iron ore, coal & coke as basic inputs. The plant has a Direct Reduction Plant (DRP) to produce sponge iron & Mini Blast Furnace (MBF) to produce hot metal for captive consumption in the Steel Melting Shop (SMS). Further liquid metal is converted to steel billets at Continuous Casting Machine (CCM). The steel billets are taken to Bar & Section Mill (BSM), Alloy Steel Mill (ASM) and Blooming Mill to produce rolled steel products. The 30 MW Captive Power Plant (CPP) is existing along with other ancillary/utility plants in the factory.

The compliance status of the conditions of the MoEF, Govt. of India Environmental Clearances No. J-11011/355/2004-IAII (I) dated 21-02-2006 is given below :

**COMPLIANCE STATUS OF CONDITIONS IMPOSED BY MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE VIDES THEIR LETTER NO. F No. J-11015/355/2004-I A II (I) dated 21-02-2006.**

**Period:** From 1<sup>st</sup> Oct - 2021 to 31<sup>st</sup> – March - 2022.

**(A) SPECIFIC CONDITIONS:**

Sr No	Conditions	Compliance
i)	<p>The gaseous emissions from various process units shall conform to the load / mass based standards notified by this Ministry on 19<sup>th</sup> May, 1993 and standards prescribed from time to time. At no time the emission level shall go beyond the prescribed standards. On line continuous monitoring system shall be installed in stacks to monitor SPM and Interlocking facilities shall be provided so that process can be automatically stopped in case emission level exceeds the limit. Coke oven (non-recovery type) shall be used for power generation. Emissions from the Coke oven plant shall be within permissible limits of CPCB.</p>	<p>Adequate pollution control systems are provided at the existing sources which are in regular operation and modernization of the same is carried out from time to time. The gaseous emissions from various existing process units confirm the load/mass based standards notified by the Ministry from time to time. The emissions from the stacks meet the prescribed standards.</p> <p>Air pollution control system for the rotary kilns producing direct reduced iron comprises of waste heat recovery boilers and electrostatic precipitators. The cleaned gases after ESP are released to atmosphere through a 55 m &amp; 60 m high forced draft chimney.</p> <p>Two separate fume/dust extraction and control system (i.e. The Primary and Secondary Fume Extraction System for SMS was installed &amp; commissioned on July 2012 for further improving the Dust &amp; Fume extraction) comprising of reverse air bag house, pulse jet bag house &amp; common chimney of height 43 m are provided for 50 T capacity electric arc furnace (EAF) and ladle heating furnace (LHF).</p> <p>At CPP, air pollution control system comprising of devices i.e. economizer, air preheater, and electrostatic precipitator are designed for the full production capacity of FBC Boiler. The discharge of the electrostatic precipitator is through a stack of height 55 m with tops diameter 1.6 m. The discharge meets the norms. The waste heat recovered at WHRBs provided at DRI plant is also used for power generation at CPP.</p> <p>At coal washery, crushed coal is conveyed through conveyor belt for washing. Once the coal is mixed water there is no air pollution at the section. However the conveyor belts carrying crushed coal to coal washery section completely covered from top and both sides.</p>

The Mini Blast Furnace (MBF) (350 M3) is provided with adequate APC system. From MBF, the dust-laden gas after the dust catcher is cleaned in the GCP. There is two-stage venturi system, first stage provides the pre-cleaning of the gas and the second stage provides the final cleaning of the gas. The Blast Furnace gas after the venturi enters the moisture separator, where the finest water droplets are flung against the scrubber shell and run down into the sump and gas free particle leaves the GCP, the cleaned MBF gas is used at Sinter plant, Reheating furnaces of rolling mills and Hardening furnace.

There is an effective air pollution control systems at Sinter plant. The system comprises of Suction Ducting, Dust Settling Chamber, Electrostatic Precipitator, ID Fan and Stack. The cleaned gases after ESP are released to atmosphere through forced draft chimney.

Online continuous ambient air quality monitoring system has been installed at three locations.

On line continuous monitoring system has been installed in stacks to monitor SPM & SO<sub>2</sub>.

The emissions from the stacks and various units meet the prescribed standards results.

Please refer **Annexure -1 (A)**

ii)	<p>In plant control measures for checking fugitive emission from all the vulnerable sources like spillage/raw materials/coal handling etc. shall be provided. Further, specific measures like provision of dust suppression system consisting of water sprinkling, suction hoods, fans and bag filters etc. shall be installed at material transfer points, blast furnace stock house and other enclosed raw material handling areas.</p> <p>Centralized De-dusting system i.e. collection of fugitive emission through suction hood and subsequent treatment through bag filter or any other device and finally emitted through a stack of appropriately designed height conforming to the standards for induction furnaces existing in the industry and proposed induction and are furnaces. Fugitive emissions shall be regularly monitored and records maintained.</p>	<p>At the vulnerable fugitive emission sources like spillage/raw materials/coal handling etc., in plant centralized de-dusting facility provided. The plant has provided dust suppression system consisting of water sprinklers, suction hood, Covered shed and conveyor, bag filters at various points such as material transfer points, and other enclosed raw material handling areas in the existing plant.</p> <p>Fugitive emissions are being regularly monitored and maintained the records as per guidelines.</p>
iii)	<p>The company shall install Waste Heat recovery Boilers (WHRB) to recover the waste heat and generate power from the steam produced by the WHRB. Char shall be used in the power plant. The particulate emissions from the WHRB and Direct Reduction Iron (DRI) plant shall be controlled by installation of ESP as per the CPCB specifications and particulate emissions shall not exceed 50 mg/Nm<sup>3</sup>. Further, the company shall install bag filters to control gaseous emissions from the coke oven, wet scrubbers, suction hoods, dust extraction devices and fume extraction system at appropriate places to control gaseous emissions.</p>	<p>At DRP 1 &amp; DRP 2, Waste Heat Recovery Boilers (WHRSG) provided to recover the waste heat from rotary kilns for generation of power from the steam produced by WHRSG at the existing CPP. The exhaust gases from the kiln containing dust, hydrocarbons etc. are burnt in the waste heat recovery Boiler and heat of the gases is recovered in Boiler for steam generation. The gases still containing very fine particulate matter enter the electrostatic precipitator where most of the particulates settle on the electrodes and gases almost free of the dust particles are released to atmosphere at a height of 55 m &amp; 60 m through a chimney.</p> <p>The emissions from various units are within prescribed standard.</p>

iv)	<p>Total requirement of water shall not exceed 12,000 m<sup>3</sup>/d as per agreement signed with the Govt. of Maharashtra. Out of 3,000 m<sup>3</sup>/d waste water generated. 2,400 m<sup>3</sup>/d treated waste water shall be recycled and reused in the process and excess shall be used for gardening and irrigation purpose. The domestic waste water after treatment in STP shall be used for green belt development.</p>	<p>The plant meets its water requirement from Wainganga River. The river flows at a distance of 7.0 Km from the plant. Maximum water requirement for the existing steel plant is 12,000 m<sup>3</sup>/day. SISCO has been granted permission to draw water from Wainganga River @ 15,098 m<sup>3</sup>/day.</p> <p>Industrial effluent generation from the existing plant at rated capacity is 2616.50 m<sup>3</sup>/day. Existing practice of Boiler blow down recycle, dilution of neutralized DM Plant effluent, cooling tower blow down effluent, disposal for 100 % reuse / recycled in the process; green belt development is continued for the additionally generated effluent as well.</p> <p>Domestic effluent from the plant is conveyed through drains to septic tanks followed by soak pits and sewage treatment plant. Treated domestic effluent is 100 % recycled for firefighting, used for gardening and green belt development.</p>
v)	<p>The solid waste generated shall be in the form of ash, slag, mill scale, dust, sludge and iron scrap, Mill scale, coke breeze, iron ore fines, dust and sludge from Mini blast furnace (MBF), Gas cleaning plant (GCP) shall be reused in the Sinter plant. Iron sponge, iron scrap and grinder waste shall be recycled to SMS section for melting and reuse. DRP ash and dust collected from ESP of gas cleaning system of DRP shall be used in the Boiler of CPP whereas bed ash and MBF slag shall be either used for land filling or sold to cement plants. The entire quantity of fly ash, mill scale and DRP sludge from the scrubber shall be utilized for making brick in company's own brick manufacturing plant. Non-granulated slag shall be used for road making. Dust from dust extraction system shall be recycled to the Sinter plant for reuse. Dust collected from DRI plant shall be reused in sinter plant. Used / spent oil generated shall be used as anti-resting agent and excess sold to authorized re processors.</p>	<p>The generated solid mill scale, dust, sludge and iron scrap, Mill scale, coke breeze, iron ore fines, dust and sludge from Mini blast furnace (MBF), Gas cleaning plant (GCP) is being reused in the Sinter plant. Sponge iron, iron scrap and grinder waste is being recycled to SMS section for melting and reuse DRP ash and dust collected from ESP of gas cleaning system being used in the FBC Boiler of CPP, whereas bed ash is being used for land filling and MBF slag is being sold to cement plants.</p> <p>The fly ash is being utilized for making brick /Paver blocks at brick manufacturing plant and if balance is used for filling low lying area. Non-granulated slag shall be used for road making and paver block manufacturing at brick plant. Dust from dust extraction system being recycled to the Sinter plant for reuse. Dust collected from DRI plant being reused in Sinter plant. Used / spent oil generated being used as anti-rusting agent and excess sold to authorize re processors.</p>



vi)	The solid waste shall be generated in the form of char, kiln accretions, fly ash from ESP and bottom ash etc. Char generated shall be used in FBC Boiler having sufficient capacity to utilize the char expected to be generated after the expansion. Kiln accretions generated presently and the quality further enhanced during expansion project, shall be utilized for filling low lying areas. ETP sludge shall be used in Sinter Plant.			
		S.N.	Type of Waste	Disposal/ Utilization
		1.	Fly Ash (CPP)	Brick manufacturer / sale to cement plant.
		2.	Bed Ash (CPP)	Brick manufacturer / sale to cement plant.
		3.	Dust from Bag Filter (DRP & SMS)	Reused at Sinter Plant.
		4.	DRP Sludge	Reuse as a fuel.
		5.	Mill Scale ( Rolling Mill )	Reuse in Sinter Plant
		6.	EAF & SS Refining Converter Slag(SMS)	Brick manufacturer / Landfill.
		7.	Iron/Steel/Scrap/Rejects Billets (SMS/Rolling Mill)	Recycle in Steel Melt Shop.
		8.	Grinder Waste (SMS/Rolling Mill)	Recycle
		9.	Coal Rejected Stone & Shell (Coal Washer y)	Landfill
		10.	Granulated MBF Slag	Reuse / By sale
		11.	Granulated Residue at MBF Gas Cleaning plant	Reuse in Sinter plant.
		12.	Coke Fines (MBF Plant)	Reuse in Sinter plant.
		13.	Iron Ore Fines & Sinter (DRI & MBF Plant)	Reuse in Sinter plant
		14.	Dusts/Sludge (ETP & WTP)	Reuse
		15.	Hot returned ore (Sinter Plant)	Reuse in Sinter plant
		16.	Removed Dust (& Sinter Plant)	Reuse in Sinter plant
		17.	Sinter return fines from Sinter plant	Reuse in Sinter plant
		18.	Hot Scrap	Recycle in Steel Melt Shop
19.	DRI Ash / Char (By product)	Reuse in Captive Power plant.		

vii)	Mill scale shall be reused in Sinter plant, ESP fly ash shall be made available to the cement plants and brick making plants whereas bottom ash shall be disposed off in a suitably designed landfill as per CPCB guidelines to prevent leaching to the sub-soil and underground aquifer. Solid waste generated in the form of Iron ore fines, blast furnace slag, BF scrap scales from slab caster and scales from steel mill will be sold to the scrap dealers except for BF slag which will be sold to the cement manufacturers.	Mill scale is used in the Sinter plant. Fly ash is used in brick making plants and bottom ash is disposed off at designated landfill. BF Slag is disposed off by sale to cement manufacturers. Iron ore fines, BF Scrap scales from slab caster and scales from steel mill are used at Sinter plant.
viii)	The company shall be developing surface water harvesting structure to harvest the rain water for utilization in the lean season besides recharging the ground water table.	Rain water harvesting ponds are existing in the plant premises and channels are provided for collection of rain water of the plant into the pond. The collected rain water is utilized for various plant activities in lean season. Also it helps in recharge of ground water table.
ix)	Green belt shall be developed in at least 71.5 ha area within and around the plant premises as per the CPCB guidelines in consultation with DFO.	<p>Sunflag Iron &amp; Steel Co. Ltd. has 200 Ha of land covering factory, colony and other amenities. Presently, land available for green belt is about 72 Ha and green belt has covered the maximum portion of land.</p> <p>From the last two decade, factory is regularly carrying out tree plantation and green belt development within the factory and colony premises as per CPCB guidelines. Till date, the factory has planted approx 5,22,758 trees covering 47 varieties such as Neem, Pipal, Casia, Mango, Gulmohor, Eucalyptus, Khair, Chichwa, Shisam, Ashoka, Karanj, Teak, Jamun, Palas, Hiwar, Dhaora, Bamboo, Royal Palm, Coconut, Guahava, etc. and the survival rate is about 96 %. The green belt is spread in and around the plant area.</p>
x)	Occupational health Surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	Medical examinations of workers are carried out regularly. A dispensary with regular medical practitioner and auxiliary nursing facility is available in the plant premises. Additionally, a panel of doctors regularly visits to the factory for checkup the health of workers & staff, the records of same is being maintained.

xi)	The project authorities shall undertake eco-development measures including community welfare measures in and around the project site. An action plan indicating proposed activities under this shall be performed and submitted to the Maharashtra Pollution Control Board (MPCB) within three months from the date of issuing this letter.	Action plan for undertaking eco - development measures including community welfare measures in & around the plant indicating the activities to be performed and undertaken is submitted to Maharashtra Pollution Control Board.
xii)	Recommendations made in the corporate Responsibility for Environment Protection (CREP) for the steel plants shall be implemented and report submitted to the Ministry/CPCB/ MPCB.	M/s. Sun-flag Iron & Steel Co. Ltd. is one of the leading Corporate Houses in the country and always emphasizes on its Corporate Responsibility for Environment Protection (CREP) for steel plant. Recommendations made in the CREP for steel plant are implemented by the plant on priority basis and regularly submit the report to Ministry/CPCB/MPCB.

#### (B) General Conditions

SN	Conditions	Compliance
i	The project authorities must strictly adhere to the stipulations made by the Maharashtra Pollution Control Board (MPCB) and the State Government.	Consent to Operate is obtained from Maharashtra Pollution Control Board for existing set-up and it is valid up to 31-05-2022. Compliance of the stipulations indicated in the MPCB Consent to Operate, are regularly complied.
ii	No further expansion or modifications in the plant should be carried out without prior approval of the Ministry of Environment and Forests.	Factory will not carry out further expansion or modification in the plant without prior approval of Ministry of Environment and Forests.
iii	At least four ambient air quality monitoring stations should be established in the downward direction as well as where maximum ground level concentration of SPM, SO <sub>2</sub> and NO <sub>x</sub> are anticipated in consultation with the MPCB. Data on ambient air quality and stack emission should be regularly submitted to this Ministry including its Regional office at Bhopal and MPCB/CPCB once in six months.	Factory has an established Four Ambient Air Quality Monitoring Stations in consultation with MPCB. Factory is regularly monitoring and analyzing pollution sources. The programme includes stack sampling, ambient air quality monitoring, noise level measurement, fugitive dust monitoring and treated effluent at various locations. The plant is regularly submitting the monitored data to MPCB.  Please refer <b>Annexure - 1 (A to E)</b> .

iv	<p>Industrial waste water shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19<sup>th</sup> May, 1993 and 31<sup>st</sup> December, 1993 or as amended from time to time the treated waste water shall be utilized for plantation purpose.</p>	<p>For the treatment of industrial effluent generated from the existing plant activities, an ETP is provided with flash mixer, Clarifier, pH correction tank, sludge storage tank, sludge transfer pump, thickener, sludge drying beds, Vacuum filter etc is provided at steel plant.</p> <p>For CPP effluent, a neutralization pit is provided.</p> <p>At Centralized Pickling Plant, separate effluent treatment plant is provided with units as Collection cum neutralization Tank for Spent Acid, Collection cum Neutralization Tank for Rinse Water, Lime Solution Tank, Gravity Sand Filters, Filter press, Clariflocculator and treated Effluent Tank. Finally treated effluent is being recycle/reused for cleaning of pickling product.</p> <p>At MBF, water is sprayed in venture scrubbers used for cleaning MBF gases. The water from scrubbers is collected in thickener. The clear overflow from the thickener is recycled back for scrubbing. The thickened sludge from the bottom is dewatered in vacuum drier and the disposed water is sent back to the thickener. Dried Sludge is being use in the Sinter plant. Effluent discharge from MBF is nil.</p>
v	<p>The project authorities must strictly comply with the provisions made in Manufacture, storage and import of Hazardous chemicals Rules 1989 as amended in 2000 for handing of hazardous chemicals etc. the project authorities must also strictly comply with the rules and regulations with regards to handing and disposal of hazardous wastes in accordance with regard to handing and disposal of hazardous wastes in accordance with the Hazardous Wastes (Management and Handing) Rules, 2003. Authorization from the State Pollution Control Board must be obtained for collection/ treatment/ storage / disposal of hazardous wastes.</p>	<p>Hazardous Chemicals handled in the factory are the Liquid Nitrogen and Liquid Oxygen. Both the chemicals are listed in the List of Hazardous Chemicals of Manufacture, Storage and Import of Hazardous Chemicals (Amendment) Rules, 2000. Both chemicals are stored in separate isolated storage tanks &amp; used through pipeline in the manufacturing process. The necessary permissions for storage of these chemicals from concerned department are taken by the factory. Safety Audit and On-site Emergency Plan are already prepared by the factory and follow it regularly.</p> <p>Oxygen &amp; Nitrogen are stored as per Explosive Rules and all the conditions will be followed meticulously. As per Hazardous Waste (MH &amp; TM) Rules, 2008 of the Environment Protection Act, 1986 and Amendments thereto, the steel plant complies with all the stipulated norms. Membership of Common Hazardous Waste Treatment Storage and Disposal Facility (CHWTSDF), Butibori has been taken, reuse &amp; disposal of hazardous wastes generated at factory is carried as per MPCB directions.</p>

vi	The overall noise levels in and around the plant area shall be kept well within the standards (85 dBA) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels should conform to the standards prescribed under EPA Rules, 1989 viz. 75 dBA (daytime) and 70 dBA (night time).	<p>Plant has provided noise control measures including acoustic hoods, silencers, enclosures etc. on all noise generating sources to maintain the noise level within the prescribed standards under EPA Rules, 1989.</p> <p>The report of the monitored noise level data please refer <b>Annexure – 1 C.</b></p>
vii	The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA / EMP report. Further, the company must undertake socio- economic development activities in the surrounding villages like community development programmes, educational programmes, drinking water supply and health care etc.	<p>SISCO comply with the recommendations made by the Public Hearing Panel for expansion project. Compliance of the safeguards recommended in the EIA/EMP report is a regular feature of the plant.</p> <p>The company is undertaking socioeconomic development activities in the surrounding villages like community development programmes, educational programmes, Skill development programmes for unemployed youth &amp; women's, drinking water supply, and health checkup camps.</p>
viii	As committed, Project authorities shall provide funds of Rs. 20.54 Crores recurring and non-recurring to implement the conditions stipulated by the Ministry of Environment and Forest as well as the State Government along with the implementation schedule for all the conditions stipulated herein. The funds so provided should not be diverted for any other purpose.	In order to implement the conditions stipulated by the Ministry of Environment and Forests, Govt. of India as well as the Maharashtra Government, factory has carried out capital expenditure on pollution control facilities and providing adequate funds for capital & recurring expenditure.
ix	The regional office of this Ministry at Bhopal/ MPCB/ CPCB will monitor the stipulated conditions. A six monthly compliance report and the monitored data along with statistical interpretation shall be submitted to them regularly.	<p>Noted.</p> <p>Six monthly EC compliance report is being submitted on regular basis.</p>

<b>x</b>	The Project Proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the MPCB/ Committee and may also be seen at website of the Ministry of Environment and Forests at <a href="http://ensfor.nic.in">http://ensfor.nic.in</a> . This should be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same should be forwarded to the Regional office.	Complied.
<b>xi</b>	Project authorities should inform the Regional Office as well as the Ministry the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.	The factory has already informed the Regional Office as well as Ministry about the date of financial closure and final approval of the project and the date of commencing the land development work.
<b>5.</b>	The Ministry may revoke or suspend the clearance, if implementation of any of the above condition is not satisfactory	Noted.
<b>6.</b>	The Ministry reserve the right to stipulate additional conditions if found necessary. The company in a time bound manner will be implement these condition.	Noted.
<b>7.</b>	The above condition will be enforced, inter-alia under them provision of the water (Prevention & Control of Pollution) Act 1974, the Air (Prevention & Control of Pollution) Act 1981, The Environment Protection Act 1986, Hazardous wastes (Management and handling ) Rules 2003 and the Public (Insurance) Liability Act,1991 along with their amendments and rules.	Noted and Implemented.

**COMPLIANCE STATUS OF CONDITIONS IMPOSED BY MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE VIDE THEIR LETTER NO. J-11011/355/2004-IAII (I) dated 02-05-2017**

**Period:** From 1<sup>st</sup> October - 2021 to 31<sup>st</sup> – March - 2022.

**(A) SPECIFIC CONDITIONS :**

Sr No	Conditions	Compliance
i)	The project proponent shall install 24x7 air monitoring devices to monitor air emissions, as provided by the CPCB and submit report to Ministry and its Regional Office.	Complied.
ii)	The canal passing through the project site should be fenced on both the sides, leaving a passage for maintenance related activities by the concerned department. No effluent should be discharged into the canal. No water from the canal should be abstracted without permission.	Complied.
iii)	The natural drainage passing through the site should not be disturbed or diverted and no solid waste or liquid effluent should be discharged into the drain.	Complied.
iv)	A statement on carbon budgeting including the quantum of equivalent Co2 being emitted by the existing plant operations, the amount of carbon sequestered annually by the existing green belt and the proposed green belt and the quantum of equivalent Co2 that will be emitted due to the proposed expansion shall be prepared by the project proponent and submitted to the Ministry and the Regional Office of the Ministry. This shall be prepared every year by the project proponent. The first such budget shall be prepared within a period of 6 months and subsequently it should be prepared every year.	Complied.  For year 2020-2021 <b>Annexure-3</b> attached herewith.



v)	For the employees working in high temperature zones falling in the plant operation areas, the total shift duration would be 4 hrs or less per day where the temperature is more than 50°C. Moreover, the jobs of these employees will be alternated in such a way that no employee is subjected to working in high temperature area for more than 1 hr continuously. Such employees would be invariably provided with proper protective equipments, garments and gears such as head gear, clothing, gloves, eye protection etc.	Complied.
vi)	Continuous stack monitoring facilities for all the stacks shall be provided and sufficient air pollution control devices viz. Electrostatic precipitator (ESP), bag house, bag filters etc. shall be provided to keep the emission levels below 50 mg/Nm <sup>3</sup> and installing energy efficient technology.	Complied.
vii)	Efforts shall further be made to use maximum water from the rain water harvesting sources. Use of air cooled condensers shall be explored and closed circuit cooling system shall be provided to reduce water consumption and water requirement shall be modified accordingly. All the effluent should be treated and used for ash handling, dust suppression and green belt development. A revised water balance statement should be submitted by the Project Proponent with the 6 monthly compliance report.	Complied.
viii)	All the coal fines and char shall be utilized within the plant and no char shall be used for briquette making or disposed off anywhere else. Scrap shall be used in steel melting shop (SMS) and SMS slag and kiln accretions shall be properly utilized. All the other solid waste including broken refractory mass shall be properly disposed off in environment-friendly manner.	Complied .

<b>ix)</b>	All internal roads shall be black topped/Concretized/Paver blocked or shall be any other type of pucca road. The roads shall be regularly cleaned with mechanical sweepers. A 3-tier avenue plantation using native species shall be developed along the roads. Facilities for parking of trucks carrying raw coal from the linked coalmines shall be created within the Unit.	Complied.
<b>x)</b>	The Standards issued by the Ministry vide G.S.R. No. 277(E) dated 31st March, 2012 regarding integrated iron and steel plant shall be followed.	Standard followed as per MoEFCC /SPCB Guidelines.
<b>xi)</b>	The National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 shall be followed.	Standard followed as per MoEFCC / SPCB Guidelines.
<b>xii)</b>	Gaseous emission levels including secondary fugitive emissions from all the sources shall be controlled within the latest permissible limits issued by the Ministry vide G.S.R. 414(E) dated 30th May, 2008 and regularly monitored. Guidelines / Code of Practice issued by the CPCB shall be followed.	Emission level controlled within latest permissible limits as per MoEFCC/CPCB Guidelines.
<b>xiii)</b>	Vehicular pollution due to transportation of raw material and finished product shall be controlled. Proper arrangements shall also be made to control dust emissions during loading and unloading of the raw material and finished product.	Complied, arrangement has been made to control dust emission during loading & Unloading of trucks.
<b>xiv)</b>	'Zero' effluent discharge shall be strictly followed and no waste water shall be discharged outside the premises. The calculations to this effect shall be submitted.	Complied, achieved zero effluent discharge.
<b>xv)</b>	Regular monitoring of in-fluent and effluent surface, sub-surface and ground water shall be ensured and treated waste water shall meet the norms prescribed by the State Pollution Control Board ( SPCB) or described under the E(P) Act whichever are more stringent.	Complied, regular monitoring of effluent & water is carried out as per guidelines, treated waste water is within norms of prescribe standard of SPCB & reuse in the process of plant..

<b>xvi)</b>	Proper handling, storage, utilization and disposal of all the solid waste shall be ensured and regular report regarding toxic metal content in the waste material and its composition, end use of solid/hazardous waste shall be submitted to the Ministry's Regional Office, SPCB and CPCB.	Complied.
<b>xvii)</b>	A time bound action plan shall be submitted to reduce solid waste generated due to the project related activities, its proper utilization and disposal.	Complied.
<b>xviii)</b>	Proper utilization of fly ash shall be ensured as per Fly Ash Notification, 1999 and subsequent amendment in 2003 and 2009. All the fly ash shall be provided to cement and brick manufacturers for further utilization and Memorandum of Understanding shall be submitted to the Ministry's Regional Office at Chennai.	At present there is no fly ash generation, as Power plant has not been installed against approval in EC 02.05.2017. Hence this condition will be full filled after installation & commissioning of new Captive Power Plant.
<b>xix)</b>	A Risk and Disaster Management Plan shall be prepared and a copy submitted to the Ministry's Regional Office, SPCB and CPCB within 3 months of issue of environment clearance letter.	Complied.
<b>xx)</b>	Green belt shall be developed in at least 33% of the project area by planting native and broad leaved species in consultation with local DFO and local communities as per the CPCB guidelines.	Complied .
<b>xxi)</b>	At least 5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on locals need and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office. Implementation of such program shall be ensured by constituting a Committee comprising of the proponent, representatives of village Panchayat and District Administration. Action taken report in this regard shall be submitted to the Ministry's Regional Office.	Complied, Enterprise Social Commitment work has been taken based on local need as per requirement of Gram / Village panchayat and District administration

xxii)	<p>The proponent shall prepare a detailed CSR Plan for every year for the next 5 years for the existing-cum-expansion project, which includes village-wise, sector-wise (Health, Education, Sanitation, Health, Skill Development and infrastructure requirements such as strengthening of village roads, avenue plantation, etc) activities in consultation with the local communities and administration. The CSR Plan will include the amount of 2% retain annual profits as provided for in Clause 135 of the Companies Act, 2013 which provides for 2% of the average net profits of previous 3 years towards CSR activities for life of the project. A separate budget head shall be created and the annual capital and revenue expenditure on various activities of the plan shall be submitted as part of the Compliance Report to RO. The details of the CSR Plan shall also be uploaded on the company website and shall also be provided in the annual report of the company.</p>	<p>The Budget for spending under CSR activities for the year 2019-20 was approved by the Board of Directors of the Company at its meeting held on 21st May, 2019 of Rs. 1,48,37,673/- and budget for the year 2020-21 was Rs. 2,65,98,308/- as per the CSR Policy of the Company.</p> <p>The details of CSR expenditure incurred has been published in the Annual Report 2019-20.</p> <p>As per Section 135 of the Companies Act, 2013, the amount required to be spent on Corporate Social Responsibility (CSR) activities for the financial year is derived by formula i.e. 2% of the average net profits of the Company for immediately three (3) preceding financial years.</p> <p>As per this clause xxii, the CSR budget for the future five (5) years is required, which at this point of time is neither possible nor permitted to be arrived at as this is a future event. However, the same can be furnished on the yearly basis after adoption of the Audited Annual Accounts by the Board of Directors of the Company, which may kindly be noted.</p> <p>Please refer <b>Annexure 2</b></p>
xxiii)	<p>The Company shall submit within three months their policy towards Corporate Environment Responsibility which shall inter-alia address</p> <p>(i) Standard operating process/procedure to bring into focus any infringement/deviation/violation of environmental or forest norms/conditions,</p> <p>(ii) Hierarchical system or Administrative order of the Company to deal with environmental issues and ensuring compliance to the environmental clearance conditions and</p> <p>(iii) System of reporting of non-compliance/violation environmental norms to the Board of Directors of the company and/or stakeholders or shareholders.</p>	<p>Complied.</p>
xxiv)	<p>The project proponent shall provide for solar light system for all common areas, street lights, villages, parking around project area and maintain the same regularly.</p>	<p>Partly Complied .</p>

xxv)	The project proponent shall provide for LED lights in their offices and residential areas.	Complied.
xxvi)	The project proponent shall install bio gas plant for kitchen waste utilization generated in their plant canteen and township (If any). The generated gas shall be utilized in their canteen and manure shall be used in their garden.	Complied.
xxvii)	Provision shall be made for the housing of construction labours within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, Safe drinking water, medical health care, creche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.	Complied.
xxviii)	Public health center of the factory should be strengthened and also extend medical facilities to the villagers inhabiting surrounding areas. A report in this regard to be submitted along with the 6 monthly compliance report.	Complied .

**(B) General Conditions : -**

S.No.	Conditions	Compliance
i)	The project authorities must strictly adhere to the stipulations made by the Maharashtra Pollution Control Board and the State Government.	Noted and complied.
ii)	No further expansion or modifications in the plant should be carried out without prior approval of the Ministry of Environment and Forests and Climate Change (MoEF & CC).	Noted

iii)	At least four ambient air quality monitoring stations should be established in the downward direction as well as where maximum ground level concentration of PM10, PM2.5 SO2 and NOx are anticipated in consultation with the SPCB. Data on ambient air quality and stack emission should be regularly submitted to this Ministry including its Regional office at Nagpur and MPCB/CPCB once in six months.	Complied.
iv)	Industrial waste water shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19 <sup>th</sup> May, 1993 and 31 <sup>st</sup> December, 1993 or as amended from time to time the treated waste water shall be utilized for plantation purpose.	Complied. Industrial waste water collected and treated at ETP, maintained parameters within permissible limit of CPCB & SPCB.
v)	The overall noise levels in and around the plant area shall be kept well within the standards (85 dBA) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels should conform to the standards prescribed under EPA Rules, 1989 viz. 75 dBA (daytime) and 70 dBA (night time).	Complied.
vi)	Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	Complied .
vii)	The company shall develop rain water harvesting structures to harvest the rain water for utilization in the lean season besides recharging the ground water table.	Complied. Rain water harvesting ponds are made in the plant premises and channels are provided for collection of rain water of the plant into the pond. The collected rain water is utilized for various plant activities in lean season. Also it helps in recharge of ground water table.

viii)	The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA / EMP report. Further, the company must undertake socioeconomic development activities in the surrounding villages like community development programmes, educational programmes, drinking water supply and health care etc.	<p>Complied, SISCO comply with the recommendations made by the Public Hearing Panel for expansion project. Compliance of the safeguards recommended in the EIA/EMP report is a regular feature of the plant.</p> <p>The company is undertaking socioeconomic development activities in the surrounding villages like community development programmes, educational programmes, Skill development programmes for unemployed youth &amp; women's, drinking water supply, and health checkup camps.</p>
ix)	Requisite funds shall be earmarked towards capital cost and recurring cost/Annum for environment pollution control measures to implement the conditions stipulated by the Ministry of Environment, Forest and Climate Change (MoEFCC) as well as the State Government. An implementation schedule for implementing all the conditions stipulated herein shall be submitted to the Regional Office of the Ministry at Nagpur. The funds so provided shall not be diverted for any other purpose.	Refer <b>Annexure 2.</b>
x)	A copy of clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parishad/Municipal Corporation, Urban Local Body and the local NGO, if any, from whom suggestions/representations, if any, were received while processing the proposal. The clearance letter shall also be put on the web site of the company by the proponent.	Complied.
xi)	The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of the MOEFCC at Nagpur. The respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; PM10, SO2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.	Complied.



<b>xii)</b>	The project proponent shall also submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by e-mail) to the Regional Office of MOEFCC, the respective Zonal Office of CPCB and the SPCB. The Regional Office of this Ministry at Nagpur / CPCB / SPCB shall monitor the stipulated conditions.	Noted & Complied as per guidelines. Six monthly EC compliance report is being submitted on regular basis.
<b>xiii)</b>	The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental conditions and shall also be sent to the respective Regional Office of the MOEFCC at Nagpur by e-mail.	Complied.
<b>xiv)</b>	The Project Proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB and may also be seen at Website of the Ministry of Environment, Forests and Climate Change (MoEFCC) at <a href="http://envfor.nic.in">http://envfor.nic.in</a> . This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same should be forwarded to the Regional office at Nagpur.	Complied.

<b>xv)</b>	Project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.	<p>The company have approached prospective lenders for tie-up of funding the proposed projects and have received part sanction. However, the sanction formalities are yet to be Complied.</p> <p>Accordingly, financial closure for the entire projects are yet to be completed.</p> <p>Partially expansion project of granted EC has been completed. After start of balance project financial closure date and date of commencing of land development work will be submitted.</p>
<b>1.</b>	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.	Noted
<b>2.</b>	The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.	Noted
<b>3.</b>	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 Wastes (Management, Handling and Trans boundary Movement) Rules 2008 and the Public (Insurance) Liability Act, 1991 along with their amendments and rules.	Noted.

**COMPLIANCE STATUS OF CONDITIONS IMPOSED BY MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE VIDE THEIR LETTER NO. J-11011/355/2004-IAII (I) dated 09-11-2020**

**Period:** From 1<sup>st</sup> October - 2021 to 31<sup>st</sup> – March - 2022.

<b>A</b>	<b>Specific conditions</b>	<b>Compliance</b>
i	PP shall use low Sulfur coal in the Combustor. Post Combustion control for SO <sub>2</sub> emission shall be included for coal with sulphur content of 1.2%	Noted, and complied.  Low Sulphur coal is using in Combustor. Refer our compliance report submitted to your office vide letter No.Poll/MoEFCC/FC-2/3A/2724 dtd 24.03.2022
ii	CEMS shall be installed on the of Combustor stack,	Complied.  CEMS (Continuous Emission Monitoring System) is installed in Combustor stack.
iii	Entire quantity of dolo char generated shall be used for power generation in side steel works itself.	Complied.  Entire quantity of dolo char generation is used for power generation in Captive Power Plant (CPP). The dolo char used 5082 MT in CPP for year 2020-2021. and 7770 MT used in CPP for year 2021-2022..
iv	Combustor shall be designed to achieve PM, SO <sub>2</sub> and NO <sub>x</sub> emission norms notified by MoEF&CC in December, 2015	Complied.  Combustor has been designed to achieve PM, SO <sub>2</sub> and NO <sub>x</sub> emission norms notified by MoEFCC in December, 2015. Refer our compliance report submitted to your office vide letter No.Poll/MoEFCC/FC-2/3A/2724 dtd 24.03.2022
<b>B</b>	<b>General Conditions</b>	
<b>I</b>	<b>Statutory compliance:</b>	
i	The Environment Clearance (EC) granted to the project/ activity is strictly under the provisions of the EIA Notification, 2006 and its amendments issued from time to time. It does not tantamount/ construe to approvals/ consent/ permissions etc., required to be obtained or standards/conditions to be followed under any other Acts/Rules/Subordinate legislation, etc., as may be applicable to the project	Agreed, we are strictly following the provisions of the EIA Notification, 2006 and its amendments issued from time to time.  We have taken all the relevant permissions as applicable to the Project.

II	Air quality monitoring and preservation	
i	<p>The project proponent shall install 24x7 Continuous Emission Monitoring System (CEMS) at process stacks to monitor stack emission as well as Continuous Ambient Air Quality Station (CAAQS) for monitoring AAQ parameters with respect to standards prescribed in Environment (Protection) Rules 1986,- The CEMS and CAAQMS shall be connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.</p>	<p>Complied.</p> <p>Sunflag provided 24x7 Continuous Emission Monitoring System (CEMS) at process stacks to monitor stack emission and also provided Continuous Ambient Air Quality Station (CAAQS) for monitoring AAQ parameters with respect to standards prescribed in Environment (Protection) Rules 1986, The CEMS and CAAQMS are connected to SPCB and CPCB online servers, The emissions level are within prescribed limit and calibrate these systems from time to time according to equipment supplier specification through equipment manufacturer /supplier, Refer our compliance report submitted to your office vide letter No.Poll/MoEFCC/FC-2/3A/2724 dtd 24.03.2022</p>
i	<p>The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through labs recognised under Environment (Protection) Act, 1986</p>	<p>Complied.</p> <p>Fugitive emissions in the plant premises is being monitored in every month through labs recognised under Environment (Protection) Act, 1986 and monthly report submitted to State Pollution Control Board. Refer our compliance report submitted to your office vide letter No.Poll/MoEFCC/FC-2/3A/2724 dtd 24.03.2022</p>
ii	<p>Sampling facility at process stacks and at quenching towers shall be provided as per CPCB guidelines for manual monitoring of emissions.</p>	<p>Complied.</p> <p>Sampling facilities has been provided at process stacks and at quenching towers as per CPCB guidelines for manual monitoring of emissions. Refer our compliance report submitted to your office vide letter No.Poll/MoEFCC/FC-2/3A/2724 dtd 24.03.2022</p>
iii	<p>The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.</p>	<p>Complied.</p> <p>Sunflag already provided leakage detection and mechanized bag cleaning facilities for</p>

		regular maintenance of bags. Refer our compliance report submitted to your office vide letter No.Poll/MoEFCC/FC-2/3A/2724 dtd 24.03.2022
iv	Secondary emission control system shall be provided at SMS Converters.	<p>Complied.</p> <p>Primary and Secondary Fume Extraction cum dust collection system has been provided at SMS Converters, Electric arc furnace(EAF) and Laddle Heat Furnace (LHF) to control the emissions from Steel Melt Shop area. Refer our compliance report submitted to your office vide letter No.Poll/MoEFCC/FC-2/3A/2724 dtd 24.03.2022</p>
v	The project proponent use leak proof trucks/dumpers carrying coal and other raw materials and cover them with tarpaulin.	<p>Complied.</p> <p>Sunflag already using leak proof trucks / dumpers for carrying coal and other raw materials and cover them with tarpaulin. Refer our compliance report submitted to your office vide letter No.Poll/MoEFCC/FC-2/3A/2724 dtd 24.03.2022</p>
vi	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)	<p>Not applicable, as we have not installed coke oven plant .</p> <p>However, we have full fledged spillage collection facilities are provided for coal and coke through mechanized mobile equipments like Bobcat, Tata ACE Tipping to collect spillage etc. The industrial vacuum cleaning facility is also provided for road sweeping and plant floor dust collection on daily basis. Refer our compliance report submitted to your office vide letter No.Poll/MoEFCC/FC-2/3A/2724 dtd 24.03.2022</p>
vi	The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as a mended subsequently and put on the website of the company.	<p>Complied.</p> <p>Copy of Environmental statement for each financial year in Form-V has been submitted on regular basis to the Maharashtra Pollution Control Board , also submitted to MoEFCC along with Six Monthly compliance report regularly . also</p>

		put on the website of the company. Form V for last financial year ( April-2020 to March-2021) Refer our compliance report submitted to your office vide letter No.Poll/MoEFCC/FC-2/3A/2724 dtd 24.03.2022
vii	Land-based APC system shall be installed to control coke pushing emissions.	Not applicable, as we have not installed Coke Oven Plant.
viii	Monitor CO, HC and O <sub>2</sub> in flue gases of the coke oven battery to detect combustion efficiency and cross leakages in the combustion chamber	Not applicable, as we have not installed Coke Oven Plant.
ix	The coke oven gas shall be subjected to desulfurization if the sulphur content in the coal exceeds 1%	Not applicable, as we have not installed Coke Oven Plant.
x	Wind shelter fence and chemical spraying shall be provided on the raw material stock piles.	Complied.  Wind shelter fence is provided on raw material stock piles and chemical BT 8080 (Bio Krishi Udyog) is spraying on the raw material stock piles. Refer our compliance report submitted to your office vide letter No.Poll/MoEFCC/FC-2/3A/2724 dtd 24.03.2022
xi	Design the ventilation system for adequate air changes as per prevailing norms for all tunnels, motor houses, Oil Cellars.	Complied.  Ventilation system for adequate air changes as per norms for all tunnels, motor houses, Oil Cellars etc are already provided. Refer our compliance report submitted to your office vide letter No.Poll/MoEFCC/FC-2/3A/2724 dtd 24.03.2022
<b>III</b>	<b>Water quality monitoring and preservation</b>	
i	The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R 277 (E) dated 31st March 2012 (Integrated iron & Steel); G.S.R 414 (E) dated 30th May 2008 (Sponge Iron) as amended from time to time; S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to	Complied.  Sunflag already installed 24x7 continuous Effluent Monitoring System with respect to standards prescribed in Environment (Protection) Rules 1986 and results are connected to SPCB and CPCB on line servers. Calibrate these system from time to time according to equipment supplier M/s Forbes Marshall. Calibration report. Refer our compliance

	equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories	report submitted to your office vide letter No.Poll/MoEFCC/FC-2/3A/2724 dtd 24.03.2022
ii	The project proponent shall monitor regularly ground water quality at least twice a year (pre and post monsoon) at sufficient numbers of piezometers/ sampling wells in the plant and adjacent areas through labs recognised under Environment (Protection) Act, 1986 and NABL accredited laboratories	<p>Complied.</p> <p>Sunflag monitor regularly ground water quality at least twice a year (pre and post monsoon) at sufficient numbers of sampling wells and pond in the plant and adjacent areas through labs recognised under Environment (Protection) Act, 1986 and NABL accredited laboratories.</p> <p>Refer our compliance report submitted to your office vide letter No.Poll/MoEFCC/FC-2/3A/2724 dtd 24.03.2022</p>
iii	The project proponent shall provide the ETP for coke oven to meet the standards prescribed in G.S.R 277 (E) dated 31st March 2012 (Integrated iron & Steel); G.S.R 414 (E) dated 30th May 2008 (Sponge Iron) as amended from time to time; S.O. 3305 (E) dated 7thDecember 2015 (Thermal Power Plants) as amended from time to time as amended from time to time	Not applicable, as we have not installed Coke Oven Plant.
iv	Adhere to 'Zero Liquid Discharge'	<p>Complied.</p> <p>'Zero Liquid Discharge' has been implemented.</p> <p>100% of any effluent generated in the plant is reused/ recycled.</p>
v	Sewage Treatment Plant shall be provided for treatment of domestic waste water to meet the prescribed standards.	<p>Complied.</p> <p>Sewage Treatment Plant are already provided for treatment of domestic waste water, parameters maintained within prescribed standards. The STP photo with analysis reports. Refer our compliance report submitted to your office vide letter No.Poll/MoEFCC/FC-2/3A/2724 dtd 24.03.2022</p>
vi	Garland drains and collection pits shall be provided for each stock pile to arrest the run- off in the event of heavy rains and to check the water pollution due to surface run off.	Garland drains and collection pits for stock piles work is under progress.



vii	Tyre washing facilities shall be provided at the entrance/exit of the plant gates.	Tyre washing facilities work is under progress.
viii	CO <sub>2</sub> 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	SMS have Primary and Secondary Fume / Dust Extraction System with high capacity bag filters & suction blowers. Working efficiently and maintain the emissions within prescribed limits.
ix	Water meters shall be provided at the inlet to all unit processes in the steel plants.	Complied.  Water meters are already provided at the inlet to all unit processes in the steel plants. Refer our compliance report submitted to your office vide letter No.Poll/MoEFCC/FC-2/3A/2724 dtd 24.03.2022
x	The project proponent shall make efforts to minimize water consumption in the steel plant complex by segregation of used water, practicing cascade use and by recycling treated water	Complied.  Water consumption maintained at minimum level by recycling of waste water after treatment. Treated waste water is being used in process as a make up to Sinter, DRP, MBF / SMS slag quenching, Rolling mill etc.
<b>IV</b>	<b>Noise monitoring and prevention</b>	
i	Noise quality shall be monitored as per the prescribed Noise Pollution (Regulation and Control) Rules, 2000 and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report	Complied.  Noise level is being monitored on regular basis and maintained as per the prescribed Noise Pollution (Regulation and Control) Rules, 2000 and report in this regard is being submitted to MoEFCC Regional Office of the Ministry as a part of six-monthly compliance report. Refer our compliance report submitted to your office vide letter No.Poll/MoEFCC/FC-2/3A/2724 dtd 24.03.2022
<b>V</b>	<b>Energy Conservation measures</b>	
i	Energy conservation measures may be adopted such as adoption of solar energy and provision of LED lights etc., to minimize the energy consumption	Complied.  Energy conservation measures has been adopted by providing solar street lights, and replacement of all lights with LED

		lights and up gradation in electrical control system etc. thus minimize the energy consumption. Refer our compliance report submitted to your office vide letter No.Poll/MoEFCC/FC-2/3A/2724 dtd 24.03.2022
<b>VI</b>	<b>Waste management</b>	
i	An attrition grinding unit to improve the bulk density of BF granulated slag from 1.0 to 1.5 Kg/l shall be installed to use slag as river sand in construction industry.	Our entire BF slag is being sold to Cement industries like ACC cement, Emami Cement, Ambhuja cement etc. BF slag is utilized for manufacturing of slag cement in cement industries. Refer our compliance report submitted to your office vide letter No.Poll/MoEFCC/FC-2/3A/2724 dtd 24.03.2022
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 maximize heat recovery.	At present not applicable, as we have not installed Coke Oven Plant.
iii	Carbon recovery plant to recover the elemental carbon present in GCP slurries for use in Sinter plant shall be installed.	100% GCP slurry is being used at Sinter plant.
iv	Used refractories shall be recycled as far as possible.	Complied.  Used refractories is being recycled, Buyback system is adopted with refractory suppliers / manufacturers.. Refer our compliance report submitted to your office vide letter No.Poll/MoEFCC/FC-2/3A/2724 dtd 24.03.2022
v	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	Complied.  Fly ash is used for in house manufacturing of fly ash bricks & paver blocks and also sold to brick manufacturers. Refer our compliance report submitted to your office vide letter No.Poll/MoEFCC/FC-2/3A/2724 dtd 24.03.2022
vi	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.	Complied.  Oil Collection pits are provided in oil cellars to collect and reuse/recycle spilled oil. Oil collection trays are provided.  Refer our compliance report submitted to your

		office vide letter No.Poll/MoEFCC/FC-2/3A/2724 dtd 24.03.2022
vii	Kitchen waste shall be composted or converted to biogas for further use.	<p>Complied.</p> <p>Kitchen waste compost machine has been installed at our Nursery and compost is being used for nursery / plantation. Refer our compliance report submitted to your office vide letter No.Poll/MoEFCC/FC-2/3A/2724 dtd 24.03.2022</p>
<b>VII</b>	<b>Green Belt</b>	
i	Green belt shall be developed in an area equal to 33% of the plant area with a native tree species in accordance with CPCB guidelines. The greenbelt shall inter alia cover the entire periphery of the plant.	<p>Complied.</p> <p>The existing Green belt has been developed in an area equal to 33%( i.e.72 Hectare) of the plant area with a native tree species in accordance with CPCB guidelines. The greenbelt are inter alia cover the entire periphery of the plant, Total plantation has been done till date 5,22,000 nos, will also be increased the green belt wherever possible in the project area, 25 Miyawaki sites of each site 500-600 feet square plot has been earmarked at different location of plant. The drawing of Plant layout, marked green belt area is attached herewith as per <b>Annexure-23</b>.</p>
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.	<p>GHG emissions of Sunflag steel was accounted and submitted for previous year and for 2020-2021, a statement of carbon budgeting and amount of carbon sequestered by the existing green belt is calculated Refer our compliance report submitted to your office vide letter No.Poll/MoEFCC/FC-2/3A/2724 dtd 24.03.2022 also submitted to MoEFCC website on 30.11.2021.</p> <p>Adequate green belt have been developed in a nd around the plant to reduce the Co2 emissions. Existing green belt found to be good, Iso increase the green belt by planting</p>

		maximum trees along the railway line, waste dump area, loading & unloading area etc and wherever possible.
<b>VIII</b>	<b>Public hearing and Human health issues</b>	
i	Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.	<p>Complied.</p> <p>Emergency plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan has been prepared and submitted along with six monthly compliance report. Refer our compliance report submitted to your office vide letter No.Poll/MoEFCC/FC-2/3A/2724 dtd 24.03.2022</p> <p>Mock drills and awareness programme for the employees are conducted periodically. Refer our compliance report submitted to your office vide letter No.Poll/MoEFCC/FC-2/3A/2724 dtd 24.03.2022</p>
ii	The project proponent shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protection Equipment (PPE) as per the norms of Factory Act	<p>Complied.</p> <p>Heat stress analysis for the workmen who work in high temperature work zone has been carried out, accordingly shift duration for the employees working in high temperature zone have been followed. and also provided Personal Protection Equipment (PPE) as per the norms of Factory Act. Refer our compliance report submitted to your office vide letter No.Poll/MoEFCC/FC-2/3A/2724 dtd 24.03.2022</p>
iii	Occupational health surveillance of the workers shall be done on a regular basis and records maintained	<p>Complied.</p> <p>Medical examinations of workers are carried out regularly. A dispensary with regular medical practitioner and auxiliary nursing facility is available in the plant premises. Additionally, a panel of Doctors regularly visits to the factory for check up the health of workers and Staff. Refer our compliance report submitted to your office vide letter No.Poll/MoEFCC/FC-2/3A/2724 dtd</p>

		24.03.2022
<b>IX</b>	<b>Corporate Environment Responsibility</b>	
i	The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.	<p>Complied.</p> <p>Company has submitted Environment policy duly approved by Board of Directors towards CER along with previous compliance report.</p> <p>Refer our compliance report submitted to your office vide letter No.Poll/MoEFCC/FC-2/3A/2724 dtd 24.03.2022</p>
ii	A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization	<p>Complied, separate Environmental Cell with qualified personnel has been provided under Section Head &amp; control under Director-Technical and Chief Operating Officer.</p> <p>Refer our compliance report submitted to your office vide letter No.Poll/MoEFCC/FC-2/3A/2724 dtd 24.03.2022</p>
<b>X</b>	<b>Miscellaneous</b>	
i	The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently	<p>Complied. Advertisement have been made in the local news paper within prescribed period &amp; also displayed in the Sunflag Company website.</p> <p>Refer our compliance report submitted to your office vide letter No.Poll/MoEFCC/FC-2/3A/2724 dtd 24.03.2022</p>
ii	The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.	<p>Complied. Copies of EC has been submitted to Local bodies, Gram Panchayat samiti etc..</p> <p>Refer our compliance report submitted to your office vide letter No.Poll/MoEFCC/FC-2/3A/2724 dtd 24.03.2022</p>

iii	The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.	<p>Complied. Copies of environment clearance letter, results of monitoring data report are uploaded on Sunflag company website link at <a href="https://sunflagsteel.com/1695-2/">https://sunflagsteel.com/1695-2/</a>. on half yearly basis.</p> <p>Also the Half yearly compliance report is uploaded in Sunflag Steel web site. Refer our compliance report submitted to your office vide letter No.Poll/MoEFCC/FC-2/3A/2724 dtd 24.03.2022</p>
iv	The project proponent shall monitor the criteria pollutants level namely; PM10, SO2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company	<p>Complied, on line monitoring of pollutants data level namely; PM10, SO2, NOx (ambient levels &amp; stack emissions) has been monitored for the projects and displayed the same at the Main Gate of the company.</p> <p>Refer our compliance report submitted to your office vide letter No.Poll/MoEFCC/FC-2/3A/2724 dtd 24.03.2022</p>
v	The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.	<p>Complied,</p> <p>The Six monthly status of compliance report of EC conditions has been uploaded on website of the ministry of Environment, Forest and Climate Change at environment clearance portal. Refer our compliance report submitted to your office vide letter No.Poll/MoEFCC/FC-2/3A/2724 dtd 24.03.2022</p>
vi	The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.	<p>Refer our compliance report submitted to your office vide letter No.Poll/MoEFCC/FC-2/3A/2724 dtd 24.03.2022</p>

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.  Financial closure and final approval of project will be submitted after commissioning of Combustor.
viii	The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.	Agree to comply with this condition.
ix	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forest, and Climate Change (MoEF&CC)	Agree to comply with this condition.
x	Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986	Agree to comply with this condition.
xi	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory	Agree to comply with this condition.
xii	The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.	Agree to comply with this condition.
xiii	The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.	Agree to comply with this condition.
xiv	Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010	Ok, Noted.



## ANNEXURE-1. (A)

### STACK EMISSION STATUS

**Location :S-4 (BSM)**

Stack Identity	<b>S-4 (BSM)</b>
Stack attached to	Reheating Furnace of Bar & Section Mill
Material of construction	Mild Steel
Stack height above ground level	65.0 mtr.
Stack shape at top	Circular
Stack diameter	1.5 mtr
Type of fuel	Furnace Oil & BF Gas

#### Results of Analysis

Sr. No.	Date of Monitoring	Temp (°C)	Velocity of Flue Gas (m/sec)	Volume of Flue Gas (Nm <sup>3</sup> /hr)	Total Particulate Matter (PM) (mg/Nm <sup>3</sup> )	SO <sub>2</sub> (kg/day)	NO <sub>x</sub> (mg/Nm <sup>3</sup> )
1	04-10-2021	312	11.2	35498.7	28.1	161.7	308.2
2	11-10-2021	307	10.6	33960.4	31.8	194.5	282.8
3	19-10-2021	322	11.5	35830.5	34.4	240.5	284.6
4	25-10-2021	314	10.6	33402.0	22.2	190.0	276.3
5	01-11-2021	305	10.8	34686.1	26.3	163.8	327.3
6	08-11-2021	312	10.5	33102.7	23.4	172.2	279.7
7	15-11-2021	315	11.1	34753.9	24.7	235.5	304.2
8	22-11-2021	174	12.4	51234.4	20.1	264.1	258.0
9	01-12-2021	302	10.6	34082.9	21.4	184.0	312.6
10	20-12-2021	318	11.3	35322.7	22.5	193.5	306.0
11	27-12-2021	294	10.1	32908.6	23.1	200.9	334.4
12	03-01-2022	288	9.7	31949.8	22.3	180.6	276.4
13	10-01-2022	297	10.0	32445.2	20.5	178.6	261.4
14	18-01-2022	307	9.50	30299.5	23.7	179.0	274.4
15	24-01-2022	282	9.30	30965.4	23.8	187.0	269.9
16	01-02-2022	307	9.4	29884.7	18.5	173.9	281.7



17	14-02-2022	284	9.50	31679.7	20.8	181.7	274.7
18	22-02-2022	298	8.50	27643.8	19.4	162.8	386.1
19	01-03-2022	312	9.80	30921.6	16.8	171.8	263.9
20	09-03-2022	302	8.70	27994.4	24.0	191.7	292.1
21	15-03-2022	299	9.10	29304.4	22.5	164.1	304.2
22	21-03-2022	306	9.40	29933.8	25.3	177.9	289.9
<b>Method</b>		IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 1):1985 RA 2019	IS 11255 (Part 2):1985 RA 2019	IS 11255 (Part 7):2005 RA 2017

Norms: **Total Particulate Matter (PM)-50 mg/Nm<sup>3</sup>.**

**Sulphur Dioxide – 2916 Kg/Day.**

**Oxides of Nitrogen – 400 mg/Nm<sup>3</sup>**

### **STACK EMISSION STATUS**

**Location:-S-5 SMS-Secondary**

Stack Identity	<b>S-5 SMS-Secondary</b>
Stack attached to	EAF & LHF of Steel Melting Shop through Bag Filters
Material of construction	Mild Steel
Stack height above ground level	36.75 mtr.
Stack shape at top	Circular
Stack diameter	4.3 mtr
Type of fuel	Type of Fuel Electricity & O <sub>2</sub> is used for melting

### **Results of Analysis**

Sr. No.	Date of Monitoring	Temp (°C)	Velocity of Flue Gas (m/sec)	Volume of Flue Gas (Nm <sup>3</sup> /hr)	Total Particulate Matter (PM) (mg/Nm <sup>3</sup> )
1	05-10-2021	87	12.7	535251.8	23.6
2	13-10-2021	82	12.3	527037.5	26.4
3	21-10-2021	88	13.4	562700.7	28.1
4	26-10-2021	81	13.8	590627.9	20.9
5	01-11-2021	85	13.5	571732.4	23.3
6	09-11-2021	92	13.9	577261.4	21.0
7	16-11-2021	87	13.0	547056.3	20.6
8	24-11-2021	91	12.3	512958.8	23.8
9	02-12-2021	84	11.1	473850.1	21.3
10	10-12-2021	92	11.6	481753.4	21.5
11	16-12-2021	95	10.3	426397.8	27.6
12	21-12-2021	92	11.6	481681.7	20.2
13	28-12-2021	78	9.20	400090.2	20.0
14	04-01-2022	82	10.3	441206.8	20.8
15	11-01-2022	78	10.4	452178.8	22.4
16	19-01-2022	87	11.1	469009.2	18.9
17	25-01-2022	91	10.8	452720.9	17.2
18	04-02-2022	96	11.7	481801.8	18.3
19	11-02-2022	78	10.2	443591.4	17.3

20	17-02-2022	84	10.9	465372.1	20.3
21	21-02-2022	92	9.90	414156.2	19.0
22	07-03-2022	86	11.6	491017.0	17.2
23	16-03-2022	94	10.9	453529.3	20.4
24	22-03-2022	92	10.2	426202.4	21.2
25	29-03-2022	96	12.4	509291.3	21.6
<b>Method</b>		IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 1):1985 RA 2019

Norms: **Total Particulate Matter (PM)- 50 mg/Nm<sup>3</sup>.**

### **STACK EMISSION STATUS**

**Location:- S-3 FBC Boiler ESP (CPP)**

Stack Identity	S-3 FBC Boiler ESP (CPP)
Stack attached to	FBC Boiler of CPP through ESP
Material of construction	Mild Steel
Stack height above ground level	55 mtr.
Stack shape at top	Circular
Stack diameter	1.6 mtr
Type of fuel	Coal Fines, DRI Ash, ESP Dust

#### Results of Analysis

Sr. No.	Date of Monitoring	Temp(°C)	Velocity of Flue Gas (m/sec)	Volume of Flue Gas (Nm <sup>3</sup> /hr)	Total Particulate Matter (PM) (mg/Nm <sup>3</sup> )	SO <sub>2</sub> (kg/day)	NO <sub>2</sub> (mg/ Nm <sup>3</sup> )
1	06-10-2021	122	8.16	43355.6	28.3	608.2	416.2
2	14-10-2021	107	7.7	42580.01	31.1	567.7	328.4
3	13-11-2021	109	8.21	45101.5	31.9	614.9	426.9
4	20-11-2021	114	8.60	46798.8	29.3	598.8	372.2
5	25-11-2021	112	8.20	44899.0	33.8	602.2	379.2
6	03-12-2021	126	8.60	45581.3	24.7	626.9	429.6
7	13-12-2021	122	8.30	44346.5	32.6	606.4	436.4
8	22-12-2021	132	8.70	45276.6	27.1	620.5	430.2
9	29-12-2021	115	7.60	41583.2	31.4	578.1	431.8
10	05-01-2022	124	7.60	40588.7	26.3	553.2	427.0
11	12-01-2022	118	7.82	41961.7	27.8	542.1	433.4
12	20-01-2022	122	7.40	39573.6	30.0	494.7	401.1
13	27-01-2022	128	8.20	43007.5	29.9	536.0	383.6
14	02-02-2022	117	7.50	40349.5	22.9	563.1	409.5
15	15-02-2022	128	8.10	42480.9	25.7	534.5	392.8
16	23-02-2022	132	7.40	38489.2	24.8	510.8	418.2
17	02-03-2022	136	7.60	39446.0	28.2	541.9	416.2

18	10-03-2022	138	8.12	41447.3	30.5	533.6	413.7
19	17-03-2022	142	7.90	40192.2	26.4	517.7	406.5
20	25-03-2022	144	8.30	42157.8	29.4	515.6	395.1
	<b>Method</b>	IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 1):1985 RA 2019	IS 11255 (Part 2):1985 RA 2019	IS 11255 (Part 7):2005 RA 2017

Norms: **Total Particulate Matter (PM)-50 mg/Nm<sup>3</sup>.**  
**Sulphur Dioxide – 4100 Kg/Day.**

### STACK EMISSION STATUS

**Location:-S-10 (MBF Stoves)**

Stack Identity	S-10 (MBF Stoves)
Stack attached to	MBF Gas Fired Hot Blast Burner Stoves
Material of construction	Mild Steel
Stack height above ground level	45.0 mtr.
Stack shape at top	Circular
Stack diameter	2.0 mtr
Type of fuel	MBF Cleaned Gas & Coke

#### Results of Analysis

Sr. No.	Date of Monitoring	Temp (°C)	Velocity of Flue Gas (m/sec)	Volume of Flue Gas (Nm <sup>3</sup> /hr)	Total Particulate Matter (PM) (mg/Nm <sup>3</sup> )	SO <sub>2</sub> (kg/day)	NO <sub>x</sub> (mg/Nm <sup>3</sup> )	CO %
1	06-10-2021	157	11.3	86149.6	24.1	448.9	141.3	0.02
2	14-10-2021	174	12.1	88949.5	26.2	483.0	148.4	0.02
3	21-10-2021	162	13.3	100577.3	22.5	545.4	165.7	0.04
4	25-10-2021	155	12.8	98329.2	21.4	529.7	163.0	0.02
5	05-11-2021	156	13.2	101236.5	19.0	473.6	135.3	0.01
6	10-11-2021	158	12.6	95967.8	20.5	488.2	138.3	0.01
7	17-11-2021	148	12.1	94375.2	18.0	490.3	156.2	0.03
8	25-11-2021	164	11.5	86611.1	21.6	552.4	171.3	0.02
9	03-12-2021	156	11.5	88521.0	16.5	476.6	152.9	0.02
10	10-12-2021	162	11.8	89564.5	17.8	468.1	147.2	0.01
11	16-12-2021	246	15.5	98117.9	15.5	465.9	141.2	0.01
12	22-12-2021	174	13.2	96730.4	17.4	481.6	158.4	0.01
13	29-12-2021	168	12.4	92716.1	16.8	496.2	172.9	0.01
14	05-01-2022	164	14.1	106064.9	14.4	549.8	145.1	0.01
15	12-01-2022	172	12.2	90195.4	13.7	485.9	181.3	0.02
16	20-01-2022	168	13.1	97385.9	16.2	503.3	168.1	0.01
17	27-01-2022	157	12.2	93411.6	16.3	530.8	176.5	0.02

18	09-02-2022	158	11.3	86592.1	15.9	561.6	160.9	0.02
19	17-02-2022	152	10.5	81200.6	15.8	557.4	168.3	0.02
20	23-02-2022	162	11.9	90162.3	16.1	256.2	162.8	0.01
21	07-03-2022	164	11.0	82494.5	13.1	480.8	166.4	0.02
22	17-03-2022	154	11.2	86410.4	14.4	469.9	156.9	0.02
23	24-03-2022	158	12.2	93279.7	15.8	505.1	182.8	0.01
24	29-03-2022	162	12.4	93915.8	17.3	521.3	176.1	0.02
<b>Method</b>		IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 1):1985 RA 2019	IS 11255 (Part 2):1985 RA 2019	IS 11255 (Part 7):2005 RA 2017	

Norms: **Total Particulate Matter (PM)-30 mg/Nm<sup>3</sup>.**

**Sulphur Dioxide – 1620 Kg/Day.**

**Oxides of Nitrogen – 200 mg/Nm<sup>3</sup>**

**Carbon Monoxide - 1.0 %**

### STACK EMISSION STATUS

**Location:-S-23 (Sinter Plant)**

Stack Identity	<b>S-23 (Sinter Plant)</b>
Stack attached to	Head ESP at Sinter Plant
Material of construction	Mild Steel
Stack height above ground level	50.0 mtr.
Stack shape at top	Circular
Stack diameter	3.0 mtr
Type of fuel	Coke Breeze/Fines

#### Results of Analysis

Sr. No.	Date of Monitoring	Temp(° C)	Velocity of Flue Gas (m/sec)	Volume of Flue Gas (Nm³/hr)	Total Particulate Matter (PM) (mg/Nm³)	SO <sub>2</sub> (kg/day)	NO <sub>x</sub> (mg/Nm³)
1	07-10-2021	174	17.1	283036.1	42.8	239.0	344.2
2	20-10-2021	148	15.4	271328.5	41.7	237.5	342.1
3	27-10-2021	146	14.4	254116.1	42.0	228.4	369.5
4	02-11-2021	152	14.2	247258.9	44.8	236.0	366.9
5	18-11-2021	154	16.1	278662.4	40.4	232.0	356.2
6	22-11-2021	126	10.9	202600.3	42.3	214.5	375.4
7	06-12-2021	158	11.6	199942.3	38.9	222.9	338.2
8	17-12-2021	152	12.1	210064.2	33.5	211.7	358.4
9	24-12-2021	164	11.9	202287.9	38.6	196.2	287.9
10	31-12-2021	172	13.1	218142.5	34.9	233.3	317.9
11	06-12-2021	146	8.30	92064.9	42.8	76.5	341.8
12	16-12-2021	145	8.30	93293.4	26.7	82.2	317.7
13	24-12-2021	142	8.90	100005.1	39.7	82.2	322.6
14	31-12-2021	138	7.48	84576.3	33.1	77.4	336.6
15	06-01-2022	148	10.4	183551.6	36.7	219.2	358.0
16	13-01-2022	168	11.4	191404.4	40.7	210.3	360.3



17	21-01-2022	173	11.0	182346.0	42.9	226.1	372.5
18	28-01-2022	154	12.9	222701.6	36.9	212.2	346.7
19	05-02-2022	162	12.2	207732.3	34.7	263.2	336.6
20	10-02-2022	172	12.8	212359.6	31.7	246.4	340.7
21	18-02-2022	168	11.7	196430.0	35.1	260.3	354.0
22	25-02-2022	157	11.9	204043.3	35.3	249.8	346.2
23	04-03-2022	176	13.9	228043.4	37.8	255.9	306.9
24	11-03-2022	164	12.3	208504.9	34.4	224.5	321.6
25	23-03-2022	178	11.5	218358.4	38.2	247.5	324.9
<b>Method</b>		IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	S 11255 (Part 1):1985 RA 2019	IS 11255 (Part 2):1985 RA 2019	IS 11255 (Part 7):2005 RA 2017

Norms: **Total Particulate Matter (PM)-50 mg/Nm<sup>3</sup>.**  
**Sulphur Dioxide – 272 Kg/Day.**  
**Oxides of Nitrogen – 500 mg/Nm<sup>3</sup>**

### STACK EMISSION STATUS

**Location:-S-24 (Sinter Plant)**

Stack Identity	<b>S-24 (Sinter Plant)</b>
Stack attached to	Tail ESP at Sinter Plant
Material of construction	Mild Steel
Stack height above ground level	40.0 mtr.
Stack shape at top	Circular
Stack diameter	2.376 mtr
Type of fuel	Coke Breeze/Fines

### Results of Analysis

Sr. No.	Date of Monitoring	Temp(°C)	Velocity of Flue Gas (m/sec)	Volume of Flue Gas (Nm <sup>3</sup> /hr)	Total Particulate Matter (PM) (mg/Nm <sup>3</sup> )	SO <sub>2</sub> (kg/day)	NO <sub>x</sub> (mg/Nm <sup>3</sup> )
1	07-10-2021	142	8.3	93591.4	46.3	79.3	344.1
2	20-10-2021	138	8.12	91783.09	47.6	83.7	339.6
3	27-10-2021	138	9.26	104681.6	44.9	74.4	359.7
4	02-11-2021	135	8.20	94398.7	36.1	84.5	338.2
5	11-11-2021	132	8.20	94750.0	34.2	81.1	329.5
6	18-11-2021	148	9.60	105950.2	42.1	75.1	347.9
7	23-11-2021	138	8.89	100536.8	43.6	78.9	353.9
8	06-12-2021	146	8.30	92064.9	42.8	76.5	341.8
9	16-12-2021	145	8.30	93293.4	26.7	82.2	317.7
10	24-12-2021	142	8.90	100005.1	39.7	82.2	322.6
11	31-12-2021	138	7.48	84576.3	33.1	77.4	336.6
12	06-01-2022	137	7.90	89545.6	35.4	77.9	367.4
13	13-01-2022	143	7.30	81546.0	38.3	79.9	374.3
14	21-01-2022	148	7.60	84770.5	34.4	78.1	357.9
15	28-01-2022	143	8.30	93508.4	32.1	71.0	332.6
16	05-02-2022	138	7.70	87065.1	32.2	85.4	376.3

17	10-02-2022	134	7.40	85063.8	30.2	75.7	340.6
18	18-02-2022	142	8.20	92500.6	33.8	78.3	328.9
19	25-02-2022	152	7.50	82004.5	30.9	81.8	355.7
20	04-03-2022	154	8.10	88926.3	34.9	81.7	330.8
21	11-03-2022	145	7.60	85163.5	32.3	79.0	314.7
22	23-03-2022	148	7.40	82352.2	36.7	79.9	338.3
<b>Method</b>		IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 1):1985 RA 2019	IS 11255 (Part 2):1985 RA 2019	IS 11255 (Part 7):2005 RA 2017

Norms: **Total Particulate Matter (PM)-50 mg/Nm<sup>3</sup>.**  
**Sulphur Dioxide – 92 Kg/Day.**  
**Oxides of Nitrogen - 500 mg/Nm<sup>3</sup>**

### STACK EMISSION STATUS

**Location:- S-2 Reheating Furnace (ASM) S-1A**

Stack Identity	<b>S-2 Reheating Furnace (ASM) S-1A</b>
Stack attached to	Reheating Furnace of Alloy Steel Mill
Material of construction	Mild Steel
Stack height above ground level	30.0 mtr.
Stack shape at top	Circular
Stack diameter	1.1 mtr
Type of fuel	Furnace Oil & BF Gas

### **Results of Analysis**

Sr. No.	Date of Monitoring	Temp(°C)	Velocity of Flue Gas (m/sec)	Volume of Flue Gas (Nm <sup>3</sup> /hr)	Total Particulate Matter (PM) (mg/Nm <sup>3</sup> )	SO <sub>2</sub> (kg/day)	NO <sub>x</sub> (mg/Nm <sup>3</sup> )
1	04-10-2021	172	7.07	15761.1	23.8	90.2	317.9
2	11-10-2021	168	7.40	16644.8	27.6	88.1	305.9
3	19-10-2021	164	6.75	15323.8	20.4	69.2	253.9
4	08-11-2021	168	7.04	15836.7	18.4	85.7	304.1
5	15-11-2021	178	7.40	16473.4	20.1	84.7	296.9
6	22-11-2021	185	8.60	18797.9	17.1	80.6	252.2
7	01-12-2021	172	7.10	15758.7	18.3	96.1	285.3
8	08-12-2021	165	6.60	15013.5	19.6	90.0	271.1
9	16-12-2021	234	9.20	18070.1	19.5	102.7	236.0
10	20-12-2021	192	7.90	16977.1	17.9	105.5	257.2
11	27-12-2021	184	7.20	15821.3	17.1	104.7	281.5
12	03-01-2022	174	7.0	15709.8	17.2	82.0	259.1
13	10-01-2022	158	6.30	14499.1	15.2	81.4	272.5
14	18-01-2022	168	6.70	15203.8	15.1	46.2	249.5
15	24-01-2022	162	6.60	15049.5	19.7	79.3	253.8
16	01-02-2022	158	6.80	15717.6	14.3	81.9	234.6

17	14-02-2022	175	6.70	14834.04	18.7	81.2	240.3
18	22-02-2022	152	5.90	13956.1	19.2	77.9	256.4
19	05-03-2022	148	6.60	15595.9	20.2	89.3	246.5
20	12-03-2022	164	7.10	16183.2	18.1	80.0	228.6
21	16-03-2022	178	6.50	14492.2	21.8	87.1	240.2
22	21-03-2022	167	6.20	14043.6	18.6	86.7	246.2
<b>Method</b>		IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 1):1985 RA 2019	IS 11255 (Part 2):1985 RA 2019	IS 11255 (Part 7):2005 RA 2017

Norms: **Total Particulate Matter (PM)-100 mg/Nm<sup>3</sup>.**  
**Sulphur Dioxide – 720 Kg/Day.**

### STACK EMISSION STATUS

**Location:- S-35 Reheating Furnace (Blooming Mill)**

Stack Identity	S-35 Reheating Furnace (Blooming Mill)
Stack attached to	Reheating Furnace Blooming Mill
Material of construction	Mild Steel
Stack height above ground level	70.0 mtr.
Stack shape at top	Circular
Stack diameter	2.0 mtr
Type of fuel	Furnace Oil

Sr. No.	Date of Monitoring	Temp (°C)	Velocity of Flue Gas (m/sec)	Volume of Flue Gas (Nm <sup>3</sup> /hr)	Total Particulate Matter (PM) (mg/Nm <sup>3</sup> )	SO <sub>2</sub> (kg/day)	NO <sub>x</sub> (mg/Nm <sup>3</sup> )
1	05-10-2021	309	10.4	59037.6	31.2	209.7	295.1
2	13-10-2021	302	10.1	57424.7	34.9	383.3	304.7
3	23-10-2021	312	11.0	61931.9	27.9	359.9	282.7
4	29-10-2021	294	10.1	58528.8	24.8	377.1	289.1
5	05-11-2021	318	10.5	58587.9	25.7	236.7	315.2
6	09-11-2021	320	11.3	62642.0	23.8	397.9	295.8
7	16-11-2021	302	10.1	58111.4	26.8	355.3	318.8
8	24-11-2021	278	10.7	63772.5	27.0	427.2	271.3
9	02-12-2021	284	10.0	59027.4	22.4	277.9	307.5
10	13-12-2021	292	9.60	55930.4	24.4	297.0	341.4
11	21-12-2021	307	9.40	53125.4	26.5	306.9	329.9
12	28-12-2021	298	10.9	62646.4	25.5	289.6	297.9
13	04-01-2022	302	9.40	54100.4	23.1	282.2	291.8
14	11-01-2022	286	8.90	52724.0	25.2	280.1	285.7
15	19-01-2022	311	8.90	50126.8	26.3	265.5	266.0
16	25-01-2022	294	9.30	53764.5	23.5	283.4	230.6

17	04-02-2022	298	9.20	52874.1	20.1	291.5	296.4
18	08-02-2022	276	12.1	72535.9	20.6	333.8	256.6
19	15-02-2022	284	9.90	58377.7	23.7	326.3	291.6
20	21-02-2022	294	9.40	54464.2	21.3	290.9	285.5
21	01-03-2022	278	10.3	61272.3	21.6	335.7	262.0
22	09-03-2022	285	9.20	54161.0	22.8	299.3	292.0
23	15-03-2022	312	8.90	50039.8	22.4	317.0	321.6
24	22-03-2022	298	8.50	49143.2	23.5	313.1	302.7
<b>Method</b>		IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 1):1985 RA 2019	IS 11255 (Part 2):1985 RA 2019	IS 11255 (Part 7):2005 RA 2017

Norms: **Total Particulate Matter (PM)-50 mg/Nm<sup>3</sup>.**  
**Sulphur Dioxide – 5490 Kg/Day.**  
**Oxides of Nitrogen – 400 mg/Nm<sup>3</sup>**

### STACK EMISSION STATUS

**Location:- S-28 Flux Screening Quickling Bunker Top De-Dusting System (Sinter Plant)**

Stack Identity	<b>S-28 Flux Screening Quickling Bunker Top De-Dusting System (Sinter Plant)</b>
Stack diameter	1.1 meter

#### Results of Analysis

Sr. No.	Date of Monitoring	Temp(°C)	Velocity of Flue Gas (m/sec)	Volume of Flue Gas (Nm <sup>3</sup> /hr)	Total Particulate Matter (PM) (mg/Nm <sup>3</sup> )
1	08-10-2021	52	6.04	18443.3	21.9
2	28-10-2021	49	6.1	18862.2	23.1
3	06-11-2021	43	6.1	19346.5	19.2
4	19-11-2021	40	5.9	18801.6	18.7
5	26-11-2021	41	6.0	19091.7	17.3
6	07-12-2021	40	5.7	18105.5	17.5
7	18-12-2021	38	5.3	17072.7	20.3
8	07-01-2022	42	5.20	16604.0	16.6
9	22-01-2022	41	5.72	18079.5	18.9
10	11-02-2022	43	5.90	18688.4	15.8
11	19-02-2022	45	5.76	17977.6	14.3
12	14-03-2022	48	6.0	18552.2	17.9
13	30-03-2022	52	5.5	17071.3	21.7
<b>Method</b>	IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 1):1985 RA 2019	

Norms: **Total Particulate Matter (PM) - 50 mg/Nm<sup>3</sup>.**



## STACK EMISSION STATUS

**Location:- S-27 Flux Crusher De-Dusting System (Sinter Plant)**

Stack Identity	S-27 Flux Crusher De-Dusting System (Sinter Plant)
Stack diameter	1.1 mtr

### Results of Analysis

Sr. No.	Date of Monitoring	Temp (°C)	Velocity of Flue Gas (m/sec)	Volume of Flue Gas (Nm <sup>3</sup> /hr)	Total Particulate Matter (PM) (mg/Nm <sup>3</sup> )
1	08-10-2021	48	5.2	16069.9	13.2
2	28-10-2021	43	5.28	16575.7	10.8
3	06-11-2021	39	5.40	17424.9	13.3
4	19-11-2021	37	5.20	1673.7	12.5
5	26-11-2021	36	4.70	15152.1	11.5
6	07-12-2021	37	4.10	13151.5	11.9
7	18-12-2021	35	3.30	10725.0	12.7
8	07-01-2022	38	3.10	10079.3	14.5
9	22-01-2022	35	3.30	10724.8	13.4
10	11-02-2022	38	3.80	12343.2	11.3
11	19-02-2022	40	4.10	13278.9	11.3
12	14-03-2022	41	4.20	13268.0	12.5
13	30-03-2022	45	3.90	12196.8	17.9
<b>Method</b>		IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 1):1985 RA 2019

Norms: Total Particulate Matter (PM)-50 mg/Nm<sup>3</sup>.

### STACK EMISSION STATUS

Stack Identity	S-7 DES-II De-Dusting System of Discharge Building (DRP-1)
Stack diameter	2.0 meter

#### Results of Analysis

Sr. No.	Date of Monitoring	Temp (°C)	Velocity of Flue Gas (m/sec)	Volume of Flue Gas (Nm <sup>3</sup> /hr)	Total Particulate Matter (PM) (mg/Nm <sup>3</sup> )
1	30-10-2021	54	5.95	59689.8	47.5
2	08-03-2022	48	5.70	59087.3	38.0
3	28-03-2022	52	6.35	64119.7	32.2
<b>Method</b>		IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 1):1985 RA 2019

Norms: **Total Particulate Matter (PM)- 50 mg/Nm<sup>3</sup>.**

### STACK EMISSION STATUS

Stack Identity	S-8 Wet-Scrubber for Discharge Cooler (DRP-1)
Stack diameter	0.8 meter

#### Results of Analysis

Sr. No.	Date of Monitoring	Temp(°C)	Velocity of Flue Gas (m/sec)	Volume of Flue Gas (Nm <sup>3</sup> /hr)	Total Particulate Matter (PM) (mg/Nm <sup>3</sup> )
1	30-10-2021	65	6.79	10540.2	46.9
2	08-03-2022	64	5.60	8857.4	34.3
3	28-03-2022	68	6.10	9521.9	32.8
Method		IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 1):1985 RA 2019

Norms: **Total Particulate Matter (PM)- 50 mg/Nm<sup>3</sup>.**

### STACK EMISSION STATUS

Stack Identity	S-39 Reheating Furnace PS-12
Stack diameter	3.3 meter

#### Results of Analysis

Sr. No.	Date of Monitoring	Temp(°C)	Velocity of Flue Gas (m/sec)	Volume of Flue Gas (Nm³/hr)	Total Particulate Matter (PM) (mg/Nm³)	SO <sub>2</sub> (kg/day)	NO <sub>x</sub> (mg/Nm³)
1	29-10-2021	95	7.0	171780.1	21.5	548.5	287.8
2	29-01-2022	98	6.5	158070.1	23.5	557.6	292.6
3	02-03-2022	96	5.90	144176.9	22.3	573.1	298.5
<b>Method</b>		IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 1):1985 RA 2019	IS 11255 (Part 2):1985 RA 2019	IS 11255 (Part 7):2005 RA 2017

Norms: **Total Particulate Matter (PM)- 50 mg/Nm³.**  
**Sulphur Dioxide – 720 Kg/Day.**

### STACK EMISSION STATUS

Stack Identity	S-6 ESP WHRSG boiler for Kiln (DRP-1)
Stack diameter	3.2 meter

#### Results of Analysis

Sr. No.	Date of Monitoring	Temp (°C)	Velocity of Flue Gas (m/sec)	Volume of Flue Gas (Nm <sup>3</sup> /hr)	Total Particulate Matter (PM) (mg/Nm <sup>3</sup> )	SO <sub>2</sub> (kg/day)	NO <sub>x</sub> (mg/Nm <sup>3</sup> )	CO %
1	30-10-2021	134	9.39	193653.3	48.6	2561.7	439.2	0.05
2	08-03-2022	136	7.90	162081.8	30.5	2257.2	428.7	0.05
3	28-03-2022	142	7.52	152065.1	34.3	2153.6	433.0	0.06
<b>Method</b>		IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 1):1985 RA 2019	IS 11255 (Part 2):1985 RA 2019	IS 11255 (Part 7):2005 RA 2017	Multi Gas Analyzer Method

Norms: **Total Particulate Matter (PM)- 50 mg/Nm<sup>3</sup>.**  
**Sulphur Dioxide – 7250 Kg/Day.**  
**CO – 1.0 %**

### STACK EMISSION STATUS

Stack Identity	S-36 BELL Annealing Furnace-1
Stack diameter	0.38 meter

#### Results of Analysis

Sr. No.	Date of Monitoring	Temp(°C)	Velocity of Flue Gas (m/sec)	Volume of Flue Gas (Nm <sup>3</sup> /hr)	Total Particulate Matter (PM) (mg/Nm <sup>3</sup> )	SO <sub>2</sub> (kg/day)	NO <sub>x</sub> (mg/Nm <sup>3</sup> )
1	16-10-2021	110	11.8	3673.9	13.2	0.22	12.2
2	26-10-2021	107	11.4	3566.1	10.4	0.22	13.8
3	10-11-2021	120	12.0	3628.6	12.4	0.27	14.3
4	17-11-2021	116	12.6	3838.9	11.2	0.21	13.9
5	27-11-2021	112	11.0	3394.8	13.0	0.18	13.7
6	11-12-2021	102	10.0	3167.2	11.8	0.30	21.2
7	25-12-2021	112	11.5	3542.4	13.3	0.29	18.5
8	14-01-2022	102	9.4	2971.9	10.8	0.29	20.3
9	29-01-2022	118	10.6	3216.0	11.8	0.24	19.2
10	12-02-2022	107	9.80	3076.7	10.6	0.37	19.2
11	26-02-2022	102	8.80	2792.3	10.8	0.28	15.8
12	10-03-2022	105	9.80	3082.6	11.6	0.51	21.4
13	25-03-2022	112	9.55	2934.6	12.2	0.55	38.9
14	31-03-2022	115	9.30	2848.1	9.63	0.55	21.9
Method	IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 1):1985 RA 2019	IS 11255 (Part 2):1985 RA 2019	IS 11255 (Part 7):2005 RA 2017	IS 11255 (Part 7):2005 RA 2017

Norms: **Total Particulate Matter (PM)- 50 mg/Nm<sup>3</sup>.**  
**Sulphur Dioxide – 102 Kg/Day.**

### STACK EMISSION STATUS

Stack Identity	S-29 ESP to New WHRSG of Kiln (DRP– 2)
Stack diameter	2.8 meter

#### Results of Analysis

Sr. No.	Date of Monitoring	Temp (°C)	Velocity of Flue Gas (m/sec)	Volume of Flue Gas (Nm <sup>3</sup> /hr)	Total Particulate Matter (PM) (mg/Nm <sup>3</sup> )	SO <sub>2</sub> (kg/day)	NO <sub>x</sub> (mg/Nm <sup>3</sup> )	(CO) %
1	12-10-2021	146	9.53	146182.6	43.3	1746.9	428.4	0.05
2	22-10-2021	142	8.84	136896.3	32.8	1741.3	424.9	0.03
3	12-11-2021	138	8.42	131666.5	32.7	1527.2	397.0	0.04
4	09-12-2021	142	8.70	135471.4	27.9	1559.5	388.3	0.05
5	15-12-2021	138	8.40	131623.8	25.6	1557.4	394.9	0.04
6	23-12-2021	134	8.60	136875.0	25.3	1571.3	377.5	0.03
7.	30-12-2021	135	7.80	124250.6	30.4	1463.2	382.7	0.04
8	03-02-2022	138	7.60	118815.0	16.3	1289.5	381.3	0.03
9	08-02-2022	134	9.60	152321.7	12.0	1586.0	361.9	0.02
10	16-02-2022	132	8.20	131035.6	13.8	1329.1	373.8	0.02
11	24-02-2022	140	7.90	123368.7	16.7	1409.8	386.1	0.01
12	03-03-2022	134	6.50	102778.8	15.1	1198.8	419.4	0.03
<b>Method</b>		IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 1):1985 RA 2019	IS 11255 (Part 2):1985 RA 2019	IS 11255 (Part 7):2005 RA 2017	Multi Gas Analyzer Method

Norms: **Total Particulate Matter (PM)- 50 mg/Nm<sup>3</sup>.**  
**Sulphur Dioxide – 4520 Kg/Day.**  
**CO – 1.0 %**



### STACK EMISSION STATUS

Stack Identity	S-34 Producer Hopper (DRP – 2)
Stack diameter	1.11 meter

#### Results of Analysis

Sr. No.	Date of Monitoring	Temp (°C)	Velocity of Flue Gas (m/sec)	Volume of Flue Gas (Nm <sup>3</sup> /hr)	Total Particulate Matter (PM) (mg/Nm <sup>3</sup> )
1	12-10-2021	57	16.0	51740.5	47.4
2	22-10-2021	54	16.1	49834.2	45.4
3	12-11-2021	51	15.5	48645.6	34.5
4	09-12-2021	45	14.4	45846.7	36.6
5	23-12-2021	48	14.2	44936.0	38.8
6	30-12-2021	42	13.3	43000.8	41.8
7	03-02-2022	45	14.8	47373.6	28.1
8	12-02-2022	47	13.7	43390.5	22.5
9	16-02-2022	43	13.9	44719.3	28.7
10	24-02-2022	46	12.7	40421.3	19.5
11	03-03-2022	45	13.2	42037.0	21.4
<b>Method</b>		IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 1):1985 RA 2019

Norms: **Total Particulate Matter (PM)- 50 mg/Nm<sup>3</sup>.**

### STACK EMISSION STATUS

Stack Identity	S S-9 4.0 TPH Oil Fired Boiler for FO Storage Tank Heating
Stack diameter	0.8 meter

#### Results of Analysis

Sr. No.	Date of Monitoring	Temp(°C)	Velocity of Flue Gas (m/sec)	Volume of Flue Gas (Nm <sup>3</sup> /hr)	Total Particulate Matter (PM) (mg/Nm <sup>3</sup> )	SO <sub>2</sub> (kg/day)	NO <sub>x</sub> (mg/Nm <sup>3</sup> )
1	15-01-2022	134	5.40	6987.1	27.5	146.0	366.0
<b>Method</b>		IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 1):1985 RA 2019	IS 11255 (Part 2):1985 RA 2019	IS 11255 (Part 7):2005 RA 2017

Norms: **Total Particulate Matter (PM)- 50 mg/Nm<sup>3</sup>.**  
**Sulphur Dioxide – 157 Kg/Day.**

## ANNEXURE - 1 (B)

### AMBIENT AIR QUALITY STATUS 1.0 Location:- A - 1 (Eklari Gate)

Sr. No.	Month	Date of Monitoring	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>
			µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>
1	Oct-21	04-10-2021 to 05-10-2021	63.1	41.4	11.8	16.3
2		08-10-2021 to 09-10-2021	60.2	38.1	11.4	16.6
3		11-10-2021 to 12-10-2021	59.2	37.7	11.2	15.9
4		15-10-2021 to 16-10-2021	58.4	39.6	11.0	16.3
5		18-10-2021 to 19-10-2021	57.9	38.3	11.7	17.4
6		22-10-2021 to 23-10-2021	58.9	40.0	11.5	17.1
7		25-10-2021 to 26-10-2021	61.5	39.2	11.6	17.2
8		29-10-2021 to 30-10-2021	58.6	36.9	11.4	16.6
9	Nov-21	01-11-2021 to 02-11-2021	60.2	37.9	11.6	16.9
10		03-11-2021 to 04-11-2021	61.5	38.2	12.0	17.4
11		08-11-2021 to 09-11-2021	54.8	31.8	11.3	16.9
12		12-11-2021 to 13-11-2021	51.4	27.7	9.97	16.4
13		15-11-2021 to 16-11-2021	65.8	42.7	11.5	17.6
14		19-11-2021 to 20-11-2021	64.4	27.4	11.1	16.7
15		22-11-2021 to 23-11-2021	61.0	35.5	10.8	16.2
16		26-11-2021 to 27-11-2021	57.7	35.4	10.3	15.8
17	Dec-21	01-12-2021 to 02-12-2021	59.3	37.4	11.5	16.4
18		03-12-2021 to 04-12-2021	58.2	35.2	11.2	16.3
19		06-12-2021 to 07-12-2021	57.8	35.8	11.0	16.0

20		10-12-2021 to 11-12-2021	56.4	35.4	10.6	15.8
21		13-12-2021 to 14-12-2021	61.2	39.5	11.8	16.7
22		16-12-2021 to 17-12-2021	59.2	38.6	11.4	16.4
23		20-12-2021 to 21-12-2021	56.6	36.5	11.0	16.1
24		24-12-2021 to 25-12-2021	55.1	36.2	10.5	16.1
25		27-12-2021 to 28-12-2021	54.9	35.1	10.1	15.6
26		30-12-2021 to 31-12-2021	55.1	35.5	10.2	16.1
27	Jan-22	03-01-2022 to 04-01-2022	56.2	35.5	10.2	15.8
28		07-01-2022 to 08-01-2022	59.3	38.5	10.4	16.4
29		10-01-2022 to 11-01-2022	58.2	36.6	10.7	16.8
30		14-01-2022 to 15-01-2022	58.8	37.6	10.4	16.3
31		17-01-2022 to 18-01-2022	63.6	43.3	12.6	18.6
32		21-01-2022 to 22-01-2022	59.2	38.3	11.3	17.2
33		24-01-2022 to 25-01-2022	58.7	37.2	10.9	16.8
34		28-01-2022 to 29-01-2022	56.1	36.1	10.4	16.2
35	Feb-22	01-02-2022 to 02-02-2022	58.9	37.3	11.3	17.5
36		04-02-2022 to 05-02-2022	60.1	38.2	12.1	18.3
37		08-02-2022 to 09-02-2022	63.7	41.9	15.3	23.1
38		11-02-2022 to 12-02-2022	58.4	37.9	14.2	21.3
39		14-02-2022 to 15-02-2022	59.1	38.7	12.7	19.5
40		18-02-2022 to 19-02-2022	58.3	37.6	12.3	19.0
41		21-02-2022 to 22-02-2022	59.2	38.8	13.5	20.3
42		25-02-2022 to 26-02-2022	56.6	34.7	12.3	18.7
43	Mar-22	01-03-2022 to 02-03-2022	69.3	33.0	14.3	24.9

44	04-03-2022 to 05-03-2022	65.2	32.4	14.9	25.4
45	07-03-2022 to 08-03-2022	59.4	28.7	16.1	26.1
46	11-03-2022 to 12-03-2022	60.0	30.5	15.9	24.7
47	14-03-2022 to 15-03-2022	71.4	35.2	15.1	24.6
48	21-03-2022 to 22-03-2022	81.2	39.4	15.3	23.6
49	25-03-2022 to 26-03-2022	65.1	34.6	14.7	22.8
50	28-03-2022 to 29-03-2022	67.3	33.4	14.7	23.2
51	30-03-2022 to 31-03-2022	69.2	36.8	15.0	24.4
<b>NAAQM Standard</b>		<b>100 (24 hrs)</b>	<b>60 (24 hrs)</b>	<b>80 (24 hrs)</b>	<b>80(24 hrs)</b>

- All Concentrations are in microgram per cubic meter

## 2.0 Location :- Pump House ( Near Water Reservoir (A-2)

Sr. No.	Month	Date of Monitoring	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>
			µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>
1	Oct--21	04-10-2021 to 05-10-2021	68.1	44.2	18.1	27.8
2		08-10-2021 to 09-10-2021	65.1	41.0	17.8	27.2
3		11-10-2021 to 12-10-2021	60.2	39.4	17.2	26.8
4		15-10-2021 to 16-10-2021	59.3	39.2	16.9	25.9
5		18-10-2021 to 19-10-2021	59.2	40.4	16.4	26.8
6		22-10-2021 to 23-10-2021	56.8	35.2	15.2	25.5
7		25-10-2021 to 26-10-2021	53.9	34.1	15.6	24.8
8		29-10-2021 to 30-10-2021	55.2	35.3	15.1	23.4
9	Nov-21	01-11-2021 to 02-11-2021	63.7	40.7	17.6	26.2
10		03-11-2021 to 04-11-2021	64.0	39.3	12.3	17.7
11		08-11-2021 to 09-11-2021	59.5	36.9	11.9	17.5
12		12-11-2021 to 13-11-2021	57.0	34.6	11.3	16.9
13		15-11-2021 to 16-11-2021	58.3	35.1	11.6	17.1
14		19-11-2021 to 20-11-2021	55.3	33.5	11.6	16.5
15		22-11-2021 to 23-11-2021	54.7	33.9	11.7	17.2
16		26-11-2021 to 27-11-2021	51.1	30.3	11.2	16.5
17	Dec-21	01-12-2021 to 02-12-2021	61.0	38.7	12.8	18.4
18		03-12-2021 to 04-12-2021	58.8	36.9	12.4	18.1
19		06-12-2021 to 07-12-2021	58.0	36.3	12.5	17.5
20		10-12-2021 to 11-12-2021	58.7	36.6	12.4	17.2

21		13-12-2021 to 14-12-2021	61.1	39.3	13.2	18.3
22		16-12-2021 to 17-12-2021	59.4	38.5	12.7	18.1
23		20-12-2021 to 21-12-2021	62.4	39.6	13.3	18.5
24		24-12-2021 to 25-12-2021	60.5	39.0	12.6	18.2
25		27-12-2021 to 28-12-2021	57.2	36.5	12.2	17.5
26		30-12-2021 to 31-12-2021	58.9	36.9	12.5	17.3
27	Jan-22	03-01-2022 to 04-01-2022	56.4	35.6	12.4	17.0
28		07-01-2022 to 08-01-2022	62.4	39.3	13.5	18.8
29		10-01-2022 to 11-01-2022	59.8	38.1	13.3	18.3
30		14-01-2022 to 15-01-2022	57.8	33.7	12.7	17.5
31		17-01-2022 to 18-01-2022	64.0	44.4	14.3	21.7
32		21-01-2022 to 22-01-2022	61.9	41.3	14.1	20.6
33		24-01-2022 to 25-01-2022	59.3	37.6	13.9	20.3
34		28-01-2022 to 29-01-2022	57.8	37.2	12.6	19.2
35	Feb-22	01-02-2022 to 02-02-2022	61.3	37.7	14.3	21.7
36		04-02-2022 to 05-02-2022	59.4	36.5	13.9	21.5
37		08-02-2022 to 09-02-2022	62.2	39.5	15.0	22.9
38		11-02-2022 to 12-02-2022	59.4	38.5	13.5	21.1
39		14-02-2022 to 15-02-2022	59.7	39.2	13.9	21.6
40		18-02-2022 to 19-02-2022	58.8	38.2	13.6	20.6
41		21-02-2022 to 22-02-2022	58.7	37.5	14.3	21.2
42		25-02-2022 to 26-02-2022	58.5	38.1	13.9	20.7
43	Mar-22	01-03-2022 to 02-03-2022	78.2	38.2	13.9	23.2
44		04-03-2022 to 05-03-2022	86.4	39.5	15.4	26.9

45	07-03-2022 to 08-03-2022	73.2	37.7	17.5	26.1
46	11-03-2022 to 12-03-2022	74.6	38.0	16.6	25.1
47	14-03-2022 to 15-03-2022	72.8	36.4	13.9	26.9
48	21-03-2022 to 22-03-2022	67.4	33.7	16.3	27.5
49	25-03-2022 to 26-03-2022	67.3	34.6	12.8	24.8
50	28-03-2022 to 29-03-2022	65.2	32.6	15.9	24.5
51	30-03-2022 to 31-03-2022	67.4	33.6	16.7	26.3
<b>NAAQM Standard</b>		<b>100 (24 hrs)</b>	<b>60 (24 hrs)</b>	<b>80 (24 hrs)</b>	<b>80(24 hrs)</b>

- All Concentrations are in microgram per cubic meter



### 3.1 Location : STP (A-3)

Sr. No.	Month	Date of Monitoring	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>
			µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>
1	Oct-21	04-10-2021 to 05-10-2021	45.1	17.3	7.24	11.6
2		08-10-2021 to 09-10-2021	50.8	20.9	7.26	11.8
3		11-10-2021 to 12-10-2021	48.2	23.9	7.89	12.1
4		15-10-2021 to 16-10-2021	48.0	23.9	7.57	11.8
5		18-10-2021 to 19-10-2021	50.9	26.2	7.55	12.4
6		22-10-2021 to 23-10-2021	53.7	27.8	7.43	12.5
7		25-10-2021 to 26-10-2021	40.0	15.9	7.48	11.2
8		29-10-2021 to 30-10-2021	41.5	21.7	7.70	12.3
9	Nov-21	01-11-2021 to 02-11-2021	52.2	27.6	7.88	13.0
10		03-11-2021 to 04-11-2021	51.7	27.7	7.79	12.8
11		08-11-2021 to 09-11-2021	41.2	23.1	7.70	11.6
12		12-11-2021 to 13-11-2021	39.7	21.4	7.16	10.8
13		15-11-2021 to 16-11-2021	49.5	28.9	7.78	11.5
14		19-11-2021 to 20-11-2021	50.0	29.6	11.3	16.8
15		22-11-2021 to 23-11-2021	54.7	33.9	11.7	17.2
16		26-11-2021 to 27-11-2021	51.1	30.3	11.2	16.5
17	Dec-21	01-12-2021 to 02-12-2021	55.3	27.4	10.4	14.8
18		03-12-2021 to 04-12-2021	54.8	25.7	10.1	14.1
19		06-12-2021 to 07-12-2021	53.4	23.9	9.80	13.2
20		10-12-2021 to 11-12-2021	54.1	24.0	9.57	12.8
21		13-12-2021 to 14-12-2021	56.3	24.8	10.3	13.1

22		16-12-2021 to 17-12-2021	57.3	25.9	10.6	13.4
23		20-12-2021 to 21-12-2021	38.3	17.3	8.95	11.9
24		24-12-2021 to 25-12-2021	41.3	16.9	9.13	11.9
25		27-12-2021 to 28-12-2021	51.3	27.2	9.27	12.0
26		30-12-2021 to 31-12-2021	56.4	22.1	9.81	12.3
27	Jan-22	03-01-2022 to 04-01-2022	28.8	14.0	8.79	18.8
28		07-01-2022 to 08-01-2022	44.1	21.2	8.58	11.8
29		10-01-2022 to 11-01-2022	39.6	19.9	8.96	12.2
30		14-01-2022 to 15-01-2022	37.1	18.2	8.14	11.7
31		17-01-2022 to 18-01-2022	35.7	17.4	8.10	11.4
32		21-01-2022 to 22-01-2022	44.0	24.9	8.70	11.8
33		24-01-2022 to 25-01-2022	46.7	27.6	8.89	11.8
34		28-01-2022 to 29-01-2022	38.7	22.3	8.29	11.3
35	Feb-22	01-02-2022 to 02-02-2022	37.4	19.2	8.35	12.6
36		04-02-2022 to 05-02-2022	40.6	20.2	8.57	12.9
37		08-02-2022 to 09-02-2022	34.8	18.1	8.10	12.3
38		11-02-2022 to 12-02-2022	40.8	21.7	8.32	12.7
39		14-02-2022 to 15-02-2022	40.5	25.5	8.59	13.1
40		18-02-2022 to 19-02-2022	47.8	28.5	8.98	13.5
41		21-02-2022 to 22-02-2022	56.8	31.6	10.3	14.2
42		25-02-2022 to 26-02-2022	41.5	19.5	9.14	12.6

43	Mar-22	01-03-2022 to 02-03-2022	34.2	17.3	8.67	14.3
44		04-03-2022 to 05-03-2022	36.7	28.3	8.63	15.1
45		07-03-2022 to 08-03-2022	39.6	21.4	7.14	15.3
46		11-03-2022 to 12-03-2022	36.8	20.4	8.30	14.7
47		14-03-2022 to 15-03-2022	47.7	23.4	10.7	14.5
48		21-03-2022 to 22-03-2022	55.7	28.0	7.87	14.8
49		25-03-2022 to 26-03-2022	52.2	25.4	7.54	16.1
50		28-03-2022 to 29-03-2022	37.2	20.0	7.48	14.7
51		30-03-2022 to 31-03-2022	54.6	27.2	8.71	15.1
NAAQM Standard			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80(24 hrs)

● All Concentrations are in micro gram per cubic meter.

**4. Location : Guest House (A-4)**

Sr. No.	Month	Date of Monitoring	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>
			µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>
1	Oct--21	04-10-2021 to 05-10-2021	51.8	27.3	8.73	16.3
2		08-10-2021 to 09-10-2021	49.4	27.0	8.48	16.5
3		11-10-2021 to 12-10-2021	53.1	28.9	8.31	16.7
4		15-10-2021 to 16-10-2021	51.6	31.1	8.38	16.9
5		18-10-2021 to 19-10-2021	60.3	37.7	8.67	15.8
6		22-10-2021 to 23-10-2021	58.9	34.1	8.71	16.4
7		25-10-2021 to 26-10-2021	54.3	29.8	7.36	12.1
8		29-10-2021 to 30-10-2021	48.9	22.4	7.79	10.7
9	Nov--21	01-11-2021 to 02-11-2021	55.1	29.5	8.22	12.3
10		03-11-2021 to 04-11-2021	54.4	29.0	8.14	12.3
11		08-11-2021 to 09-11-2021	44.0	24.8	7.89	11.8
12		12-11-2021 to 13-11-2021	50.3	25.7	7.40	11.1
13		15-11-2021 to 16-11-2021	58.7	33.4	8.12	12.0
14		19-11-2021 to 20-11-2021	61.4	32.8	8.40	12.5
15		22-11-2021 to 23-11-2021	64.3	35.8	8.92	12.7
16		26-11-2021 to 27-11-2021	59.4	35.3	8.67	12.5
17	Dec-21	01-12-2021 to 02-12-2021	59.6	31.5	8.95	12.8
18		03-12-2021 to 04-12-2021	59.2	32.0	8.90	12.6
19		06-12-2021 to 07-12-2021	54.2	25.8	8.71	12.2
20		10-12-2021 to 11-12-2021	56.1	25.9	8.94	12.5
21		13-12-2021 to 14-12-2021	57.3	27.6	9.15	13.8

22		16-12-2021 to 17-12-2021	59.1	29.2	10.1	14.4
23		20-12-2021 to 21-12-2021	57.5	27.9	8.82	12.5
24		24-12-2021 to 25-12-2021	58.7	29.5	9.64	13.4
25		27-12-2021 to 28-12-2021	58.9	28.3	9.56	13.4
26		30-12-2021 to 31-12-2021	58.8	29.1	9.89	13.3
27	Jan-22	03-01-2022 to 04-01-2022	31.5	17.8	8.35	11.7
28		07-01-2022 to 08-01-2022	54.6	32.8	8.84	12.0
29		10-01-2022 to 11-01-2022	52.7	27.8	8.94	11.7
30		14-01-2022 to 15-01-2022	47.5	20.0	8.33	11.2
31		17-01-2022 to 18-01-2022	54.2	24.7	8.42	11.8
32		21-01-2022 to 22-01-2022	55.1	29.1	8.70	12.1
33		24-01-2022 to 25-01-2022	52.4	22.8	8.15	11.5
34		28-01-2022 to 29-01-2022	51.4	24.3	7.90	11.3
35	Feb-22	01-02-2022 to 02-02-2022	56.5	23.7	8.27	12.4
36		04-02-2022 to 05-02-2022	54.4	23.6	8.75	12.4
37		08-02-2022 to 09-02-2022	60.7	39.0	9.12	13.0
38		11-02-2022 to 12-02-2022	40.6	22.7	7.86	11.5
39		14-02-2022 to 15-02-2022	56.3	27.6	8.31	12.1
40		18-02-2022 to 19-02-2022	50.5	25.0	8.99	13.2
41		21-02-2022 to 22-02-2022	47.4	22.7	8.31	12.9
42		25-02-2022 to 26-02-2022	42.4	23.2	7.85	11.8
43						
44	Mar-22	01-03-2022 to 02-03-2022	35.6	19.8	8.54	13.4
45		04-03-2022 to 05-03-2022	45.8	21.2	8.33	14.2

46	07-03-2022 to 08-03-2022	51.7	24.6	8.25	14.2
47	11-03-2022 to 12-03-2022	51.9	24.0	8.11	13.8
48	14-03-2022 to 15-03-2022	57.9	29.5	12.7	16.2
49	21-03-2022 to 22-03-2022	53.5	31.9	8.95	14.9
50	25-03-2022 to 26-03-2022	53.4	24.5	8.35	15.4
51	28-03-2022 to 29-03-2022	52.4	23.1	8.25	16.2
52	30-03-2022 to 31-03-2022	41.3	19.6	9.15	15.6
<b>NAAQM Standard</b>		<b>100 (24 hrs)</b>	<b>60 (24 hrs)</b>	<b>80 (24 hrs)</b>	<b>80(24 hrs)</b>

- All Concentrations are in microgram per cubic meter

### **ANNEXURE-1. (C)**

#### **Ambient Noise Quality Status**

Oct-2021	Hourly Average Noise Level dB (A)							
Location	1 <sup>st</sup>		2 <sup>nd</sup>		3 <sup>rd</sup>		4 <sup>th</sup>	
	09-10-2021		16-10-2021		23-10-2021		28-10-2021	
	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time
N-1 (Eklari Gate)	59.4	53.9	63.1	62.7	61.7	59.1	58.3	56.5
N-2 (Pump House-2) Near Water Reservoir	70.9	59.1	73.9	63.4	71.4	63.9	71.3	64.1
N-3 (STP)	43.8	40.1	52.6	47.3	53.0	51.7	52.9	45.8
N-4 (Guest House)	57.8	52.1	61.7	53.0	64.2	53.7	60.5	59.1
Norms	75	70	75	70	75	70	75	70

Nov-2021	Hourly Average Noise Level dB (A)							
Location	1 <sup>st</sup>		2 <sup>nd</sup>		3 <sup>rd</sup>		4 <sup>th</sup>	
	06-11-2021		13-11-2021		20-11-2021		27-11-2021	
	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time
N-1 (Eklari Gate)	63.4	59.2	58.4	56.5	59.1	58.3	70.6	65.1
N-2 (Pump House-2) Near Water Reservoir	70.1	63.5	65.1	63.8	70.6	64.2	72.5	64.1
N-3 (STP)	53.7	46.6	51.7	46.3	52.7	50.4	55.0	49.1
N-4 (Guest House)	63.5	53.0	53.7	49.2	58.5	53.2	59.2	52.2
Norms	75	70	75	70	75	70	75	70

Dec-2021	Hourly Average Noise Level dB (A)									
Location	1 <sup>st</sup>		2 <sup>nd</sup>		3 <sup>rd</sup>		4 <sup>th</sup>		5 <sup>th</sup>	
	04-12-2021		11-12-2021		18-12-2021		25-12-2021		30-12-2021	
	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time
N-1 (Eklari Gate)	58.6	56.5	70.2	63.5	71.5	63.1	60.5	59.1	61.7	59.3
N-2 (Pump House-2) Near Water Reservoir	70.5	65.1	72.4	63.6	70.1	58.9	71.3	65.1	70.1	63.1
N-3 (STP)	51.2	46.2	52.6	49.2	52.8	47.8	53.7	46.6	54.7	47.8
N-4 (Guest House)	57.3	52.6	58.6	52.2	60.7	58.5	64.1	53.0	62.9	52.6
Norms	75	70	75	70	75	70	75	70	75	70

Jan-2022	Hourly Average Noise Level dB (A)							
Location	1 <sup>st</sup>		2 <sup>nd</sup>		3 <sup>rd</sup>		4 <sup>th</sup>	
	08-01-2022		15-01-2022		22-01-2022		29-01-2022	
	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time
N-1 (Eklari Gate)	65.1	59.2	63.1	58.9	70.4	65.1	61.7	59.2
N-2 (Pump House-2) Near Water Reservoir	70.1	64.1	71.3	63.1	72.4	61.7	71.4	65.0
N-3 (STP)	51.7	46.3	52.6	46.2	54.7	49.3	53.0	51.7
N-4 (Guest House)	60.5	49.2	58.5	52.6	60.7	53.2	63.5	58.9
Norms	75	70	75	70	75	70	75	70



Feb-2022	Hourly Average Noise Level dB (A)							
Location	1 <sup>st</sup>		2 <sup>nd</sup>		3 <sup>rd</sup>		4 <sup>th</sup>	
	05-02-2022		12-02-2022		19-02-2022		26-02-2022	
	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time
N-1 (Eklari Gate)	59.1	56.5	61.7	59.1	70.1	63.1	60.5	52.1
N-2 (Pump House-2) Near Water Reservoir	70.1	65.1	72.6	64.3	73.9	63.4	71.8	65.6
N-3 (STP)	55.0	49.2	52.8	50.5	53.0	50.5	52.5	48.8
N-4 (Guest House)	59.2	53.2	60.5	53.7	62.9	58.5	61.1	57.2
Norms	75	70	75	70	75	70	75	70

March-2022	Hourly Average Noise Level dB (A)									
Location	1 <sup>st</sup>		2 <sup>nd</sup>		3 <sup>rd</sup>		4 <sup>th</sup>		5 <sup>th</sup>	
	05-03-2022		12-03-2022		19-03-2022		26-03-2022		31-03-2022	
	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time
N-1 (Eklari Gate)	71.4	65.1	70.2	63.1	61.7	59.3	60.5	58.9	70.1	65.0
N-2 (Pump House-2) Near Water Reservoir	72.0	65.9	70.6	64.2	71.5	63.9	70.2	65.1	71.3	64.0
N-3 (STP)	56.7	53.7	52.8	50.4	53.0	45.8	53.8	47.9	54.7	49.0
N-4 (Guest House)	64.2	58.6	63.1	54.7	60.5	59.2	63.0	53.0	63.5	59.0
Norms	75	70	75	70	75	70	75	70	75	70

### **ANNEXURE-1. (D)**

#### **FUGITIVE DUST EMISSION MONITORING STATUS**

<b>Sr. No.</b>	<b>LOCATION</b>	<b>Month</b>	<b>SPM (<math>\mu\text{g}/\text{m}^3</math>)</b>	<b>RSPM (<math>\mu\text{g}/\text{m}^3</math>)</b>
1	Sinter Plant (Near Main Control Room Building)	Oct – 2021	1857.3	1018.3
		Nov -2021	1789.5	986.3
		Dec – 2021	1397.9	728.4
		Jan-2022	1513.6	711.2
		Feb-2022	1758.1	842.3
		Mar-2022	1801.0	868.5
2	Raw Material Handling Area (Near Transfer Point)	Oct – 2021	1732.2	918.3
		Nov -2021	1863.6	1048.7
		Dec – 2021	1755.6	904.3
		Jan-2022	1496.3	695.0
		Feb-2022	1460.5	683.2
		Mar-2022	1391.1	520.8
3	SMS (Steel Melting Shop) ( Near Ladle Heating Furnace)	Oct – 2021	1367.0	702.5
		Nov -2021	1480.6	817.5
		Dec – 2021	1362.7	689.6
		Jan-2022	1378.2	623.5
		Feb-2022	1437.4	675.0
		Mar-2022	1338.3	641.3
4	MBF (Near Mini Blast Furnace)	Oct – 2021	1479.5	685.7
		Nov -2021	1463.7	681.7

		Dec – 2021	1477.0	692.2
		Jan.-2022	1508.3	581.0
		Feb-2022	1586.2	708.3
		Mar-2022	1417.7	636.8
5	Raw Material Feed Area (Near Mixing Area )	Oct – 2021	1512.2	708.3
		Nov -2021	1566.5	735.6
		Dec – 2021	1711.0	651.0
		Jan-2022	1736.0	831.0
		Feb-2022	1325.8	579.4
		Mar-2022	1718.4	819.0
6	DRP-2 (Near Coal Circuit Area)	Oct – 2021	1456.3	856.2
		Nov -2021	--	--
		Dec – 2021	1387.0	781.0
		Jan-2022	--	--
		Feb-2022	1352.0	681.4
		Sept-2021		
7	MBF Stock Yard (Near Day Bins)	Oct-2021	--	--
		Nov-2021	1791.6	979.5
		Dec-2021	--	--
		Jan-2022	1613.8	770.8
		Feb-2022	--	--
		Mar-2022	1322.1	612.3
Norms			2000	--

**Annexure- 1. (E)**  
**TREATED EFFLUENT QUALITY STATUS**

**1. Location : E-2 STP Outlet**

Sr. No.	Test Parameter	Measurement Unit	Test Results						Limit as per Consent Conditions
			Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	
	pH value	--	--	8.30					--
1.	Total Suspended Solids	mg/l	6.0	22.0	24.0	44.0	36.0	24.0	50
2.	Biochemical oxygen demand(BOD at 27°C for 3 days)	mg/l	10.0	17.5	19.0	20.4	27.0	26.0	300
3.	Chemical Oxygen Demand (COD)	mg/l	--	87.5	--	--	--	--	100
4.	Oil & Grease	mg/l	-	<0.2	--	--	--	--	--
5.	Total Dissolved Solids	mg/l	-	404.0	--	--	--	--	--
6.	Chloride (as Cl)	mg/l	-	69.2	--	--	--	--	--
7.	Sulphate (as SO <sub>4</sub> )	mg/l	-	17.6	--	--	--	--	--
8.	Iron (as Fe)	mg/l	-	0.12	--	--	--	--	--

### 1.1 Location : E-2 (Wastewater Tank) In Front of Raw Water Treatment Plant

Sr. No.	Test Parameter	Measurement Unit							Limit as per Consent Conditions
			Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	
1.	pH value	-	7.8	7.9	7.5	6.9	6.9	6.37	5.5 to 9.0
2.	Total Suspended Solids	mg/l	30.0	44.0	58.0	26.0	22.0	26.0	100
3.	Biochemical oxygen demand(BOD at 27°C for 3 days)	mg / l	6.40	4.0	11.8	14.0	10.0	3.0	100
4.	Chemical oxygen demand (COD)	mg / l	113.7	100.0	86.6	92.0	164.0	78.6	250
5.	Oil & Grease	mg / l	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	10
6.	Total dissolved solids	mg/l	458.0	548.0	344.0	472.0	427.0	352.0	2100
7.	Chloride (as Cl)	mg / l	56.4	94.0	33.1	55.3	65.4	53.8	600
8.	Sulphate (as SO <sub>4</sub> )	mg/l	23.3	44.9	29.3	28.1	30.1	63.5	1000
9.	Iron (as Fe)	mg/l	0.09	0.10	0.11	0.12	0.14	0.11	3.0

### 1.2 Location : E-3 (Coal Washery)

Sr. No.	Test Parameter	Measurement Unit	Test Results						Limit as per Consent Conditions
			Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	
1.	pH value	-	7.1	8.4	8.40	8.4	6.8	6.40	5.5 to 9.0
2.	Total Suspended Solids	mg/l	46.0	80.0	96.0	98.0	36.0	70.0	100
3.	Biochemical oxygen demand (BOD at 27°C for 3 days)	mg / l	2.5	2.7	2.55	3.0	2.7	3.8	100
4.	Chemical oxygen demand (COD)	mg / l	78.4	133.0	145.6	161.2	156.0	146.0	250
5.	Oil & Grease	mg / l	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	10
6.	Total dissolved solids	mg/l	596.0	604.0	560.0	632.0	940.0	1098.0	2100
7.	Chloride (as Cl)	mg / l	259.9	98.9	54.4	137.2	219.5	274.9	600
8.	Sulphate (as SO <sub>4</sub> )	mg/l	70.6	96.2	192.0	68.4	94.3	208.6	1000

9.	Iron (as Fe)	mg/l	0.18	0.21	0.12	0.20	0.16	0.36	3.0
----	--------------	------	------	------	------	------	------	------	-----

### 1.3 Location : E-4 ETP Main Outlet (Utility)

Sr. No.	Test Parameter	Measurement Unit	Test Results						Limit as per Consent Conditions
			Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	
1.	pH value	-	7.8	7.2	8.1	6.9	7.3	7.4	5.5 to 9.0
2.	Total Suspended Solids	mg/l	18.0	10.0	24.0	32.0	20.0	18.0	100
3.	Biochemical oxygen demand (BOD at 27°C for 3 days)	mg/l	3.06	2.5	2.24	2.0	4.0	4.4	100
4.	Chemical oxygen demand (COD)	mg/l	137.2	120.8	177.1	112.0	77.5	113.0	250
5.	Oil & Grease	mg/l	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	10
6.	Total dissolved solids	mg/l	410.0	486.0	260.0	386.0	240.0	262.0	2100
7.	Chloride (as Cl)	mg/l	24.9	64.3	27.5	36.2	84.1	39.8	600
8.	Sulphate (as SO <sub>4</sub> )	mg/l	32.9	60.7	48.2	35.8	34.6	83.5	1000
9.	Iron (as Fe)	mg/l	0.18	0.16	0.14	0.12	0.10	0.10	3.0

### 1.4 Location : E-5- Pickling ETP Outlet

Sr. No.	Test Parameter	Measurement Unit	Test Results						Limit as per Consent Conditions
			Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	
1.	pH value	-	7.9	--	7.9	7.1	6.9	7.1	5.5 to 9.0
2.	Total Suspended Solids	mg/l	4.0	-	6.0	5.2	11.0	14.0	100
3.	Biochemical oxygen demand (BOD at 27°C for 3 days)	mg/l	<2.0	-	<2.0	<2.0	<2.0	<2.0	100
4.	Chemical oxygen demand (COD)	mg/l	121.5	-	168.0	116.0	151.0	160.9	250
5.	Oil & Grease	mg/l	<0.2	-	<0.2	<0.2	<0.2	<0.2	10
6.	Total dissolved solids	mg/l	690.0	-	612.0	524.0	788.0	774.0	2100

7.	Chloride (as Cl)	mg/l	137.4	-	110.5	34.7	35.1	109.1	<b>600</b>
8.	Sulphate (as SO <sub>4</sub> )	mg/l	29.1	-	43.1	35.3	34.7	294.7	<b>1000</b>
9.	Iron (as Fe)	mg/l	0.24	-	0.20	0.11	0.37	0.34	<b>3.0</b>

#### 1.5 Location : E-6 Pickling Nala

Sr. No.	Test Parameter	Measurement Unit	Test Results						Limit as per Consent Conditions
			Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	
1.	pH value	-	7.0	7.9	6.9	6.9	7.1	7.2	<b>5.5 to 9.0</b>
2.	Total Suspended Solids	mg/l	94.0	54.0	72.0	38.0	72.0	50.0	<b>100</b>
3.	Biochemical oxygen demand (BOD at 27°C for 3 days)	mg/l	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<b>100</b>
4.	Chemical oxygen demand (COD)	mg/l	235.2	170.8	232.0	149.1	167.3	123.9	<b>250</b>
5.	Oil & Grease	mg/l	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<b>10</b>
6.	Total dissolved solids	mg/l	1434.0	1326.0	1488.0	1494.0	950.0	1122.0	<b>2100</b>
7.	Chloride (as Cl)	mg/l	394.8	331.5	62.4	436.1	373.7	526.0	<b>600</b>
8.	Sulphate (as SO <sub>4</sub> )	mg/l	42.1	44.5	68.8	39.0	34.6	264.6	<b>1000</b>
9.	Iron (as Fe)	mg/l	0.68	0.54	0.41	0.44	0.32	0.34	<b>3.0</b>

#### 1.6 Location : E-7 MBF ETP Outlet

Sr. No.	Test Parameter	Measurement Unit							Limit as per Consent Conditions
			Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	
1.	pH value	-	7.3	7.4	7.3	7.1	7.3	6.09	<b>5.5 to 9.0</b>
2.	Total Suspended Solids	mg/l	32.0	30.0	10.0	62.0	44.0	28.0	<b>100</b>
3.	Biochemical oxygen demand (BOD at 27°C for 3 days)	mg/l	2.8	2.5	2.6	3.7	8.0	<2.0	<b>100</b>

4.	Chemical oxygen demand (COD)	mg/l	121.5	95.8	82.6	92.0	208.0	146.1	<b>250</b>
5.	Oil & Grease	mg/l	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<b>10</b>
6.	Total dissolved solids	mg/l	1204.0	1118.0	1168.0	1348.0	2018.0	1180.0	<b>2100</b>
7.	Chloride (as Cl)	mg/l	354.8	311.7	199.3	426.3	579.2	492.2	<b>600</b>
8.	Sulphate (as SO <sub>4</sub> )	mg/l	89.7	143.5	137.3	102.5	131.2	177.5	<b>1000</b>
9.	Iron (as Fe)	mg/l	0.19	0.20	0.18	0.24	0.28	0.44	<b>3.0</b>

### 1.7 Location : E- 8 DRP Nala

Sr. No.	Test Parameter	Measurement Unit	Test Results							Limit as per Consent Conditions
			Oct-21	Nov-21	Dec-21	Dec-21	Jan-22	Feb-22	Mar-22	
1.	pH value	-	8.10	8.40	8.4	12.0	8.4	6.9	6.26	<b>5.5 to 9.0</b>
2.	Total Suspended Solids	mg/l	32.0	84.0	92.0	96.0	98.0	10.0	56.0	<b>100</b>
3.	Biochemical oxygen demand (BOD at 27°C for 3 days)	mg/l	2.50	3.0	2.0	3.67	2.8	5.5	5.4	<b>100</b>
4.	Chemical oxygen demand (COD)	mg/l	90.1	129.1	94.4	184.0	112.9	116.0	123.6	<b>250</b>
5.	Oil & Grease	mg/l	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<b>10</b>
6.	Total dissolved solids	mg/l	838.0	918.0	720.0	858.0	714.0	1296.0	786.0	<b>2100</b>
7.	Chloride (as Cl)	mg/l	234.9	118.7	31.4	103.3	181.3	261.6	171.1	<b>600</b>
8.	Sulphate (as SO <sub>4</sub> )	mg/l	94.3	189.6	107.6	67.8	108.0	120.0	135.5	<b>1000</b>
9.	Iron (as Fe)	mg/l	0.36	0.40	0.23	0.16	0.39	0.22	0.26	<b>3.0</b>



## Annexure 2

Sl. No.	CSR Activity	Actual Expenditure during the financial year 2021-22 (01.04.2021 to 31.03.2022)  (Amount in Rs.)	Budget allocation for the next 5 years  (Amount in Rs.)
A	Community Health Improvement	3,50,000	
B	Improvement in Community Education, Training and Skill Development Facilities	11,05,890	
C	Rural Development Infrastructure activities:		
i	Infrastructure development of the Community area i.e. village road/other work	5,61,320	
ii	Drinking Water and Sanitation	20,99,408	
D	Environment Sustainability and protection of Flora & Fauna	15,29,375	
E	Miscellaneous		
i	Community welfare activities including Swatch Bharat, Promotion of Sports and Cultural activities	51,30,760	
F	Disaster Management – Relief under COVID 19 Pandemic	88,67,004	
<b>TOTAL (*)</b>		<b>1,96,43,757</b>	

**Details of CSR Amount allocated to the projects during FY 2021-22:**

Project S. N.	Name of the Project	Area of Project	Location of the Project	Year of allocation	Year of commencement of Project	Amount allocated for the project (Rs
P-1 – Phase-II	Construction of Auditorium	State of Maharashtra	Bhandara	FY2021-22	FY2022-23	1,00,00,000

<b>GRAND TOTAL</b>	<b>Rs. 2,96,43,757</b>
--------------------	------------------------

(\*) – Quarter wise Details given below

### Quarter-wise Details of CSR Expenditure for the year 2021-22

(Amount in Rs.)

Particulars	Quarter ended 30.06.2021	Quarter ended 30.09.2021	Quarter ended 31.12.2021	Quarter ended 31.03.2022	Total
Community Health Improvement (Promotion of health care)	-	-	3,50,000	-	3,50,000
Improvement in Community Education, Training and Skill Development Facilities	57,330	-	-	10,48,560	11,05,890
Rural Development – Drinking Water and Sanitation	5,14,255	7,58,920	-	8,26,233	20,99,408
Rural Development – Infrastructure development of the Community area i.e. village road/other work	-	-	-	5,61,320	5,61,320
Environment Sustainability and protection of Flora & Fauna	-	15,000	-	15,14,375	15,29,375
Community welfare activities including Swatch Bharat, Promotion of Sports and Cultural activities	-	-	1,30,760	50,00,000	51,30,760
Disaster Management – Relief under COVID 19 Pandemic	2,50,600	31,89,211	51,63,120	2,64,073	88,67,004
<b>TOTAL</b>	<b>8,22,185</b>	<b>39,63,131</b>	<b>56,43,880</b>	<b>92,14,561</b>	<b>1,96,43,757</b>