

SF: Pollu/ Six Month/FC-2/9 A/2650

Date: 29.05.2021

To,

**The Additional Director,**  
Ministry of Environment, Forests & Climate Change,  
Regional Office (WCZ), Ground Floor,  
East Wing, New Secretariat Building,  
Civil Lines,  
Nagpur - 440 001

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 : Half Yearly Compliance Report of the Environmental Clearance  
for Period from 1<sup>st</sup> Oct 2020 to 31<sup>st</sup> March 2021.**

**Reference .:** MoEF & CC, Govt. of India, Environmental Clearance Letter No.  
J-11011/355/2004-IA II (I) dated 21.02.2006 , J-11011/355/2004-IA II (I)  
dated 02.05.17 and J-11011/355/2004-IA II (I) dated 09.11.20.

Dear Sir,

With reference to above EC letter, we are submitting herewith the status of progress & compliance of the conditions stipulated in environmental clearance granted to **M/S Sunflag Iron & Steel Co. Limited, Bhandara Road** for the period from 1<sup>st</sup> Oct 2020 to 31<sup>st</sup> March 2021.

Hope you will find it in order.

Thanking you.

Yours faithfully,

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



**Ramchandra Dalvi**  
Executive Director (Works)

Encl: As above

Copy to:

1. The Incharge, CPCB, Vadodara, Gujarat
2. The Regional Officer, MPCB, Nagpur
3. Sub-Regional Officer, MPCB, Bhandara

## 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 near Village Eklari, Warthi, 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 / Longitude	21°14'5" North / 79°37'50" East
5	Address for correspondence	Executive Director ( Works ),
	Address of concerned Project Chief Engineer (with Pin Code & Telephone / Telex / Fax Numbers)	M/s Sunflag Iron & Steel Co. Ltd., Village – Warthi, Tah.- Mohadi, District – Bhandara , Pin :441905 Maharashtra Ph. 07184 – 285551 to 285555 Fax – 07184 – 285570
6	Salient features	



<p>a. Of the Project</p>	<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 Defense, Agriculture Engineering Industry etc.</p> <p>Sunflag Steel is located at 21°14'05" North latitude and 79°37'50" 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>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>
<p>b. Of the Environmental Management Plan</p>	<p>At DRP air pollution control system provided for producing sponge iron from kiln comprises of waste heat recovery boilers and electrostatic precipitators.,nos.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 preheater, 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	---
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>	Not Applicable
9	Financial Details	
	a. Project costs as originally planned & subsequent revised estimates and the year of price reference.	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 Metal, Ingot /Billets, Rolled steel Products and Sinter Plant</b> .



	<p>b. Allocations made for Environmental Management Plan with item wise &amp; year wise breakup.</p>	<p>At present under existing unit following expenditure has already been made towards environmental protection, the same are as follows.</p> <table border="1" data-bbox="624 562 1428 1854"> <thead> <tr> <th>S.N.</th> <th>Environmental Component</th> <th>Capital Cost incurred so far (Rs. in Lacs)</th> <th>Recurring Cost per annum</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Air Pollution Control (ESP's, Bag filters, water cooled ducts, GCP, ACGC, Silos, stacks, online monitoring system for ambient and stack)</td> <td>5651.0</td> <td>1273</td> </tr> <tr> <td>2.</td> <td>Water Pollution Control (ETP's, STP, WTP, Neutralization tanks and allied equipments, online effluent monitoring system)</td> <td>185.0</td> <td>1030</td> </tr> <tr> <td>4.</td> <td>Noise Pollution Control (acoustic enclosers, instruments for noise measurement &amp; predictive maintenance, CBM instruments)</td> <td>25.0</td> <td>10</td> </tr> <tr> <td>5.</td> <td>Environment Monitoring and Management (regular monitoring of Environmental parameters as per statutory requirement)</td> <td>112.0</td> <td>84</td> </tr> <tr> <td>6</td> <td>Occupational Health</td> <td>45</td> <td>14.74</td> </tr> <tr> <td>7</td> <td>Green Belt</td> <td>50.0</td> <td>33</td> </tr> <tr> <td>8</td> <td>Online Stack Monitoring System</td> <td>39.0</td> <td>20</td> </tr> <tr> <td>9</td> <td>Online Effluent Monitoring system</td> <td>11.0</td> <td>14</td> </tr> <tr> <td>10</td> <td>Others (Pl. Specify)</td> <td>20.0</td> <td>20</td> </tr> <tr> <td colspan="2"><b>Total</b></td> <td><b>6503</b></td> <td><b>2560.88</b></td> </tr> </tbody> </table>	S.N.	Environmental Component	Capital Cost incurred so far (Rs. in Lacs)	Recurring Cost per annum	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	<b>Total</b>		<b>6503</b>	<b>2560.88</b>
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	<p>c. Benefit Cost Ratio / Internal rate of Return and the year of</p>	<p>----</p>																																												



	assessment.	
	d. Whether (c) includes the cost of Environmental Management as shown in the above.	-----
	b. 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.
	c. Actual expenditure incurred on the Environmental Management Plan so far	Rs. 66.98 Crores including EMP of expansion project.
10	Forest land requirement	Not Applicable
	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 if any	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 (Actual and/or Planned)	
	a. Date of commencement (Actual and/or Planned)	After got 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.
	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.
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	
	b. Date of site visit for this monitoring Report	
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.	_____



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**EC COMPLIANCE REPORT  
&  
ENVIRONMENTAL STATUS REPORT  
(October-2020 - March- 2021)**

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**



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## 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°14'5" North latitude and 79°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, MoEF 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, MoEF 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> October - 2020 to 31<sup>st</sup> – March - 2021.

**(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)**

<p>ii)</p>	<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 hand lings etc., in plant centralized de-dusting facility provided. The plant has provided dust suppression system consisting of water sprinklers, suction hood, Covered shed and conveyer, 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>
<p>iii)</p>	<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 form 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>

<p>iv)</p>	<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>
<p>v)</p>	<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-rusting 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.	<b>S.N.</b>	<b>Type of Waste</b>	<b>Disposal/ Utilization</b>
		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 Convertor 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 Washery)	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.	Sunflag Iron & 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.  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.
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 upto 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> .



<p>iv</p>	<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. 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>
<p>v</p>	<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>

<p><b>vi</b></p>	<p>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>	<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>
<p><b>vii</b></p>	<p>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>	<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>
<p><b>viii</b></p>	<p>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.</p>	<p>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 &amp; recurring expenditure.</p>
<p><b>ix</b></p>	<p>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>	<p>Noted.</p> <p>Six monthly EC compliance report is being submitted on regular basis.</p>

x	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.
xi	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.
5.	The Ministry may revoke or suspend the clearance, if implementation of any of the above condition is not satisfactory	Noted.
6.	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.
7.	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- 2020 to 31<sup>st</sup> - March - 2021.

**(A) SPECIFIC CONDITIONS :**

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.

v)	<p>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.</p>	Complied.
vi)	<p>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.</p>	Complied.
vii)	<p>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.</p>	Complied.
viii)	<p>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.</p>	Complied .

ix)	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.
x)	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.
xi)	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.
xii)	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.
xiii)	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.
xiv)	'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.
xv)	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..

xvi)	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.
xvii)	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.
xviii)	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.
xix)	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.
xx)	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 .
xxi)	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

<p><b>xxii)</b></p>	<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>
<p><b>xxiii)</b></p>	<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 being 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>
<p><b>xxiv)</b></p>	<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.	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.  The company is undertaking socioeconomic development activities in the surrounding villages like community development programmes, educational programmes, Skill development programmes for unemployed youth & women's, drinking water supply, and health checkup camps.

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 Annexure 2
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.
xii)	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.

xiii)	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.
xiv)	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.
xv)	Project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.	<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>
1.	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.	Noted
2.	The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.	Noted

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3.	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.
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**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 - 2020 to 31<sup>st</sup> - March - 2021.

A	<b>Specific conditions</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, will be complied.
ii	CEMS shall be installed on the of Combustor stack	Complied.
iii	Entire quantity of dolo char generated shall be used for power generation in sidesteel works itself.	Noted, will be complied.
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	Noted, will be complied.
B	<b>General Conditions</b>	
I	<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	Ok, Noted.
II	<b>Air quality monitoring and preservation</b>	
i	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	Complied.

	time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.	
i	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	Complied.
ii	Sampling facility at process stacks and at quenching towers shall be provided as per CPCB guidelines for manual monitoring of emissions	Complied.
iii	The project proponent shall provide leakage detection and mechanised bag cleaning facilities for better maintenance of bags.	Complied.
iv	Secondary emission control system shall be provided at SMS Converters.	Complied.
v	The project proponent use leak proof trucks/dumpers carrying coal and other raw materials and cover them with tarpaulin	Complied.
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)	Complied.
vii	Land-based APC system shall be installed to control coke pushing emissions.	Not applicable, as we don't 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 don't installed Coke Oven Plant.
ix	The coke oven gas shall be subjected to desulphurization if the sulphur content in the coal exceeds 1%	Not applicable, as we don't installed Coke Oven Plant.
x	Wind shelter fence and chemical spraying shall be provided on the raw material stock piles	Complied.
xi	Design the ventilation system for adequate air changes as per prevailing norms for all tunnels, motor houses, Oil Cellars.	Complied.

III	Water quality monitoring and preservation	
i	The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R 277 (E) dated 31st March 2012 (Integrated iron & Steel); G.S.R 414 (E) dated 30th May 2008 (Sponge Iron) as amended from time to time; S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories	Complied.
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	Complied.
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 7th December 2015 (Thermal Power Plants) as amended from time to time as amended from time to time	Complied.
iv	Adhere to 'Zero Liquid Discharge'	Complied.
v	Sewage Treatment Plant shall be provided for treatment of domestic waste water to meet the prescribed standards.	Complied.
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.	Work under progress.
vii	Tyre washing facilities shall be provided at the entrance/exit of the plant gates.	Work under progress.
viii	CO2 injection shall be provided in GCP of SMS to reduce pH in circulating water to ensure optimal recycling of treated water	Not applicable as SMS have dust Extraction System, working



	for converter gas cleaning	efficiently.
ix	Water meters shall be provided at the inlet to all unit processes in the steel plants.	Complied.
x	The project proponent shall make efforts to minimise water consumption in the steel plant complex by segregation of used water, practicing cascade use and by recycling treated water	Complied.
<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.
<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.
<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	Not applicable, as our entire BF slag is sold to Cement industry.
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.	Not applicable, as we don't 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 used at Sinter plant.
iv	Used refractories shall be recycled as far as possible.	Complied.
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.
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.

vii	Kitchen waste shall be composted or converted to biogas for further use.	Complied.
<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.	Complied.
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.	Work in progress.
<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.	Complied.
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	Complied.
iii	Occupational health surveillance of the workers shall be done on a regular basis and records maintained	Complied.
<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.	Complied.
ii	A separate Environmental Cell both at the project and company head quarter level,	Complied.

	with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization	
<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	Complied.
ii	The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.	Complied.
iii	The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.	Complied.
iv	The project proponent shall monitor the criteria pollutants level namely; 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	Ok, Noted.
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. 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.	Ok, Noted.
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	Complied.

	land development work and start of production operation by the project.	
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.	Ok, Noted.
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)	Ok, Noted.
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	Ok, Noted.
xi	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory	Ok, Noted.
xii	The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.	Ok, Noted.
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.	Ok, Noted.
xiv	Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010	Ok, Noted.
23	The Ministry considered the above recommendation of EAC and here by decided to accord Environmental Clearance for the Modernization and addition in configuration of Integrated steel plant--of existing project mentioned in the subject above to M/s Sunflag Iron & Steel Ltd. with specific and general conditions mentioned at para 22 above.	Ok, Noted.

**ANNEXURE-1. (A)**

**STACK EMISSION STATUS**

**Location :S-3 (BSM)**

Stack Identity	<b>S-3 (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	04-10-2020	298	10.7	34693.7	33.5	851.8	260.6
2	11-10-2020	317	10.8	33950.3	26.6	748.7	243.2
3	18-10-2020	309	10.3	32866.3	32.8	797.9	271.5
4	27-10-2020	312	10.5	33044.1	34.7	810.2	286.3
5	02-11-2020	318	10.6	33082.3	28.3	722.3	354.0
6	10-11-2020	322	10.6	32953.3	31.6	684.2	415.5
7	17-11-2020	302	10.7	34517.5	31.8	951.5	394.2
8	24-11-2020	312	10.8	34271.0	27.2	958.0	340.8
9	02-12-2020	310	11.0	34925.5	34.5	725.1	334.3
10	09-12-2020	305	11.2	35929.6	36.6	940.7	402.7
11	16-12-2020	302	10.8	34771.8	34.5	1461.5	413.9
12	21-12-2020	312	10.6	33420.2	37.5	644.7	334.6
13	04-01-2021	307	10.7	34122.7	36.4	416.1	382.5
14	12-01-2021	317	10.5	33074.0	35.2	365.8	405.7
15	19-01-2021	312	10.9	34648.4	34.8	413.8	429.9
16	27-01-2021	310	10.4	33123.1	32.9	653.2	426.0
17	01-02-2021	307	10.4	33324.5	35.5	1903.7	430.2

18	09-02-2021	320	11.3	35144.7	34.9	1471.2	437.9
19	15-02-2021	307	10.4	32977.4	37.5	1147.4	437.4
20	22-02-2021	317	10.8	33919.9	35.2	1393.5	422.6
21	02-03-2021	322	10.8	33725.6	35.9	1653.4	422.0
22	08-03-2021	318	10.7	33578.0	36.8	1042.0	437.4
<b>Method</b>		IS 11255 (Part 3): 2008 RA 2008	IS 11255 (Part 3): 2008 RA 2008	IS 11255 (Part 3): 2008 RA 2008	IS 11255 (Part 1): 1985 RA 2009	IS 11255 (Part 2):1985 RA 2014	IS 11255 (Part 7):2005 RA 2017

Norms: **Total Particulate Matter (PM)-100 mg/Nm<sup>3</sup>.**  
**Sulphur Dioxide – 2916 Kg/Day.**

### STACK EMISSION STATUS

**Location:-SMS-Secondary**

Stack Identity	<b>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	04-10-2020	90	12.1	507192.0	29.0
2	11-10-2020	94	11.9	491381.6	39.8
3	20-10-2020	98	11.6	477492.8	35.2
4	28-10-2020	92	12.5	521441.3	33.6
5	03-11-2020	95	12.1	499106.0	27.8
6	11-11-2020	97	12.9	53158.5	26.4
7	18-11-2020	93	13.2	548473.1	38.2
8	28-11-2020	87	12.7	537029.4	36.6
9	03-12-2020	92	12.7	528448.9	31.5
10	11-12-2020	95	11.8	487934.5	29.8
11	17-12-2020	89	12.8	536559.1	30.5
12	23-12-2020	85	11.9	505393.8	26.6
13	05-01-2021	87	12.5	529453.7	28.4
14	13-01-2021	87	11.6	489530.7	31.7
15	20-01-2021	78	12.0	518410.8	29.6
16	28-01-2021	82	11.9	508391.0	27.8
17	03-02-2021	76	12.1	525324.2	31.5
18	10-02-2021	84	12.1	514032.3	33.4



19	16-02-2021	74	12.1	528824.5	31.9
20	24-02-2021	86	12.3	520412.7	27.4
21	04-03-2021	78	12.0	520512.7	28..6
22	09-03-2021	83	11.6	496659.8	29.8
<b>Method</b>	IS 11255 (Part 3): 2008 RA 2008	IS 11255 Part 3): 2008 RA 2008	IS 11255 (Part 3): 2008 RA 2008	IS 11255 (Part 3): 2008 RA 2008	IS 11255 (Part 1): 1985 RA 2009

Norms: **Total Particulate Matter (PM)-100 mg/Nm<sup>3</sup>.**



### STACK EMISSION STATUS

**Location:-S-2 (CPP-FBC Boiler)**

Stack Identity	<b>S-2 (CPP-FBC Boiler)</b>
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	04-10-2020	152	9.63	47551.7	41.3	2066.8	748.1
2	11-10-2020	144	9.12	45899.2	37.4	2113.6	838.7
3	28-10-2020	138	8.93	45597.8	40.7	2422.7	819.1
4	05-11-2020	146	8.88	44478.0	41.7	2536.7	443.1
5	11-11-2020	152	9.30	45919.7	43.5	2317.8	437.9
6	18-11-2020	156	9.19	44955.9	36.9	2417.5	431.4
7	26-11-2020	143	9.01	45451.5	37.3	2337.5	437.1
8	03-12-2020	148	9.94	49548.1	48.3	2484.7	431.0
9	11-12-2020	136	9.00	46178.1	48.0	2520.8	412.0
10	17-12-2020	140	8.89	45174.4	46.5	2848.9	409.2
11	28-12-2020	143	8.92	44996.9	45.4	2306.5	399.1
12	06-01-2021	134	8.69	44809.1	46.8	2261.3	419.5
13	14-01-2021	142	8.95	45256.4	45.7	2358.3	427.7
14	28-01-2021	154	8.90	43738.3	43.9	2240.6	424.9
15	03-02-2021	146	8.69	43522.8	45.3	2249.8	438.5
16	10-02-2021	138	9.04	46158.9	47.6	2230.2	430.2
17	17-02-2021	142	9.06	45811.4	46.3	2319.2	407.1
18	24-02-2021	146	9.4	47077.5	40.7	2313.8	428.8

19	06-03-2021	142	8.9	45006.6	43.9	2206.0	436.3
20	10-03-2021	136	9.03	40718.8	44.0	2564.0	415.0
	<b>Method</b>	IS 11255 (Part 3): 2008 RA 2008	IS 11255 (Part 3): 2008 RA 2008	IS 11255 (Part 3): 2008 RA 2008	IS 11255 (Part 1): 1985 RA 2009	IS 11255 (Part 2):1985 RA 2014	IS 11255 (Part 7):2005 RA 2017

Norms: **Total Particulate Matter (PM)-100 mg/Nm<sup>3</sup>.**  
**Sulphur Dioxide – 4100 Kg/Day.**

### STACK EMISSION STATUS

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

Stack Identity	<b>S-10 (MBF Stoves)</b>
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> )
1	04-10-2020	146	12.4	97418.1	23.5	1427.4	385.0
2	11-10-2020	152	13.2	102211.5	28.2	1525.5	425.7
3	20-10-2020	143	13.2	103864.1	33.6	1430.1	395.1
4	27-10-2020	158	13.2	100391.9	34.6	1477.1	405.3
5	02-11-2020	148	13.2	103407.8	29.1	1469.9	378.7
6	10-11-2020	144	13.4	105960.6	33.8	1489.7	388.2
7	17-11-2020	158	13.9	106314.1	29.5	1536.1	416.3
8	24-11-2020	154	13.2	102027.4	24.2	1527.3	385.1
9	03-12-2020	154	13.8	106312.2	29.2	1590.1	323.1
10	09-12-2020	148	14.5	113187.0	31.1	1573.4	357.1
11	16-12-2020	158	14.4	109587.1	29.4	1561.9	366.6
12	23-12-2020	152	12.8	99036.6	35.2	1592.8	316.1
13	06-01-2021	154	13.1	100951.3	30.1	1554.5	339.7
14	13-01-2021	145	12.3	97018.4	26.7	1461.8	288.0
15	19-01-2021	148	13.0	101450.2	31.2	1231.3	331.1
16	27-01-2021	143	13.6	107232.4	28.6	1102.1	354.2
17	02-02-2021	147	14.2	111192.1	31.1	1447.2	384.6
18	09-02-2021	142	13.8	109702.2	31.9	1401.8	407.4

19	17-02-2021	145	13.1	102730.0	35.3	1143.9	374.7
20	23-02-2021	152	14.0	108330.0	28.4	1139.1	331.5
21	02-03-2021	148	12.5	97317.1	29.6	1111.6	404.8
22	10-03-2021	154	13.6	104525.5	31.4	1379.6	352.2
<b>Method</b>		IS 11255 (Part 3): 2008 RA 2008	IS 11255 (Part 3): 2008 RA 2008	IS 11255 (Part 3): 2008 RA 2008	IS 11255 (Part 1): 1985 RA 2009	IS 11255 (Part 2):1985 RA 2014	IS 11255 (Part 7):2005 RA 2017

Norms: **Total Particulate Matter (PM)-100 mg/Nm<sup>3</sup>.**  
**Sulphur Dioxide – 1620 Kg/Day.**

### 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 (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	04-10-2020	182	14.8	240551.1	60.2	239.8	293.1
2	11-10-2020	172	13.6	226577.5	58.9	215.9	227.3
3	22-10-2020	187	15.3	245615.8	62.4	236.3	229.6
4	29-10-2020	168	13.6	228474.6	55.2	238.2	257.9
5	06-11-2020	184	14.2	229178.9	77.2	262.2	361.3
6	13-11-2020	178	14.1	231891.3	81.7	260.7	328.2
7	20-11-2020	172	14.2	236818.6	67.5	266.6	316.2
8	27-11-2020	158	13.2	227089.0	64.2	256.5	296.6
9	05-12-2020	167	13.1	218926.7	71.9	264.9	368.6
10	12-12-2020	172	14.3	237819.4	68.1	257.1	384.9
11	19-12-2020	177	14.4	237497.1	69.9	246.5	390.9
12	24-12-2020	165	13.9	234542.0	70.6	233.8	388.1
13	30-12-2020	172	13.5	223913.4	71.4	257.9	372.6
14	08-01-2021	168	12.9	216423.3	71.3	250.9	395.9
15	16-01-2021	172	13.1	217304.4	74.9	266.1	372.9
16	21-01-2021	158	16.7	286599.5	76.2	269.4	354.5
17	30-01-2021	165	15.6	262628.2	69.3	235.9	369.7

18	05-02-2021	162	14.2	241874.6	72.8	250.8	378.3
19	11-02-2021	158	14.3	245679.0	68.6	229.1	434.9
20	19-02-2021	172	15.1	250888.2	71.4	239.5	393.4
21	26-02-2021	168	14.5	242829.3	77.3	222.3	409.9
22	05-03-2021	174	14.2	235130.4	76.3	262.1	418.7
23	11-03-2021	168	13.6	227710.1	80.5	258.5	422.5
<b>Method</b>		IS 11255 (Part 3): 2008 RA 2008	IS 11255 (Part 3): 2008 RA 2008	IS 11255 (Part 3): 2008 RA 2008	IS 11255 (Part 1): 1985 RA 2009	IS 11255 (Part 2):1985 RA 2014	IS 11255 (Part 7):2005 RA 2017

Norms: **Total Particulate Matter (PM)-100 mg/Nm<sup>3</sup>.**  
**Sulphur Dioxide – 272 Kg/Day.**

### 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	04-10-2020	155	9.02	97911.7	59.3	88.1	138.7
2	11-10-2020	148	8.98	99094.3	63.9	82.6	144.2
3	22-10-2020	144	8.92	99373.6	74.3	86.2	179.2
4	29-10-2020	142	8.90	99631.4	78.6	81.3	182.6
5	06-11-2020	156	9.14	98980.3	90.5	89.1	229.7
6	13-11-2020	147	9.00	99555.4	96.4	81.6	259.4
7	20-11-2020	152	9.25	101121.2	66.5	82.6	276.3
8	27-11-2020	142	8.70	97399.07	70.6	86.4	300.1
9	05-12-2020	148	9.20	101531.5	61.4	88.7	367.4
10	12-12-2020	154	9.36	101851.3	65.5	85.7	305.7
11	19-12-2020	160	8.98	96354.5	70.4	84.7	313.7
12	24-12-2020	157	9.21	99509.1	67.2	84.5	324.3
13	30-12-2020	145	8.83	98150.2	72.6	85.5	317.8
14	08-01-2021	146	8.86	98244.7	64.3	85.6	312.0
15	16-01-2021	138	8.76	99023.9	61.6	86.5	326.3
16	21-01-2021	153	8.96	97717.0	63.5	87.4	352.2
17	30-01-2021	142	9.16	102554.4	66.4	86.3	315.1

18	05-02-2021	148	8.97	98989.2	67.3	88.6	333.3
19	11-02-2021	136	8.75	99391.8	46.3	89.5	349.7
20	19-02-2021	145	9.04	100484.5	66.6	82.7	326.8
21	26-02-2021	154	9.35	101737.0	51.1	86.7	380.9
22	05-03-2021	152	8.98	98165.6	48.4	91.7	377.1
23	11-03-2021	147	9.14	101112.3	54.5	88.3	372.0
<b>Method</b>		IS 11255 (Part 3): 2008 RA 2008	IS 11255 (Part 3): 2008 RA 2008	IS 11255 (Part 3): 2008 RA 2008	IS 11255 (Part 1): 1985 RA 2009	IS 11255 (Part 2):1985 RA 2014	IS 11255 (Part 7):2005 RA 2017

Norms: **Total Particulate Matter (PM)-100 mg/Nm<sup>3</sup>.**  
**Sulphur Dioxide – 92 Kg/Day.**



### STACK EMISSION STATUS

**Location:-S-1A (ASM)**

Stack Identity	<b>S-1A (ASM)</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	04-10-2020	202	6.64	13868.3	26.3	105.4	247.6
2	11-10-2020	188	5.83	12546.3	26.0	190.2	237.2
3	18-10-2020	176	6.12	13522.3	31.5	205.7	250.7
4	26-10-2020	197	6.78	14311.0	33.3	212.9	255.8
5	03-11-2020	182	6.27	13671.0	27.8	152.8	258.5
6	09-11-2020	178	6.41	14099.6	25.5	156.3	271.3
7	16-11-2020	202	6.68	13951.7	23.8	128.7	255.1
8	23-11-2020	210	6.65	13658.0	28.0	182.0	265.2
9	02-12-2020	174	6.57	14581.5	33.9	167.4	243.4
10	08-12-2020	188	6.64	14289.5	33.1	180.4	294.9
11	15-12-2020	168	5.66	12733.2	37.7	102.9	280.4
12	21-12-2020	172	7.09	15805.9	30.6	177.4	282.6
13	04-01-2021	184	6.67	14479.5	33.5	156.5	247.7
14	12-01-2021	202	7.45	15558.4	29.3	108.7	248.3
15	18-01-2021	174	6.59	14624.1	31.6	83.6	224.1
16	25-01-2021	182	6.82	14869.2	36.8	126.3	239.5
17	01-02-2021	172	6.88	15337.5	34.3	130.0	252.2

18	08-02-2021	184	6.98	15151.0	33.0	184.7	353.3
19	15-02-2021	168	6.32	14216.5	32.4	130.1	325.8
20	22-02-2021	178	6.96	15309.9	31.5	121.0	382.2
21	01-03-2021	185	6.54	14164.9	35.7	177.3	300.7
22	08-03-2021	194	6.77	14380.1	34.6	89.1	289.7
<b>Method</b>		IS 11255 (Part 3): 2008 RA 2008	IS 11255 (Part 3): 2008 RA 2008	IS 11255 (Part 3): 2008 RA 2008	IS 11255 (Part 1): 1985 RA 2009	IS 11255 (Part 2):1985 RA 2014	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-34 Blooming Mill**

Stack Identity	<b>S-34 Blooming Mill</b>
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	11-10-2020	310	10.7	60407.5	34.2	1068.9	348.6
2	18-10-2020	318	10.7	59813.3	33.6	990.9	386.5
3	26-10-2020	322	10.9	60074.2	34.8	1053.8	395.9
4	05-11-2020	316	10.8	60293.1	31.4	1281.4	414.0
5	09-11-2020	307	10.8	61342.6	34.5	1449.4	424.2
6	16-11-2020	312	10.7	60366.6	32.3	1166.8	371.2
7	23-11-2020	320	10.7	59442.4	28.6	1145.1	351.0
8	02-12-2020	298	10.5	60812.3	35.8	1056.0	293.5
9	08-12-2020	307	10.4	58622.5	36.9	1418.9	431.6
10	15-12-2020	299	10.2	58702.8	37.0	1050.1	337.5
11	22-12-2020	322	11.4	63269.1	38.8	1282.6	312.3
12	05-01-2021	312	10.7	60308.1	35.8	840.1	429.8
13	18-01-2021	322	10.7	59020.6	37.4	673.2	390.2
14	25-01-2021	302	10.5	60106.5	36.0	757.1	353.1
15	02-02-2021	317	10.7	59851.0	36.8	1847.1	440.0
16	08-02-2021	312	10.4	58514.6	35.5	1370.8	367.2
17	16-02-2021	298	10.7	61561.3	37.3	749.7	427.4



18	23-02-2021	307	10.5	59590.8	35.7	1423.3	404.8
19	01-03-2021	320	10.8	60158.0	38.1	2483.6	423.7
20	09-03-2021	305	10.6	60359.4	38.8	1773.7	435.7
<b>Method</b>		IS 11255 (Part 3): 2008 RA 2008	IS 11255 (Part 3): 2008 RA 2008	IS 11255 (Part 3): 2008 RA 2008	IS 11255 (Part 1): 1985 RA 2009	IS 11255 (Part 2):1985 RA 2014	IS 11255 (Part 7):2005 RA 2017

Norms: **Total Particulate Matter (PM)-100 mg/Nm<sup>3</sup>.**  
**Sulphur Dioxide – 5490 Kg/Day.**

### STACK EMISSION STATUS

**Location:- 30 Ton BELL Furnace-1**

Stack Identity	<b>30 Ton BELL Furnace-1</b>
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> )
1	04-10-2020	124	10.4	3106.9	6.71
2	11-10-2020	118	11.0	3342.2	7.16
3	05-11-2020	107	11.4	3578.7	5.60
4	09-11-2020	127	12.4	3674.8	6.12
5	21-11-2020	117	12.4	3771.4	7.74
6	14-12-2020	107	11.5	3593.8	6.15
7	22-12-2020	118	12.1	3674.4	7.76
8	28-12-2020	122	11.7	3526.5	8.28
9	14-01-2021	115	12.7	3895.0	12.2
10	20-01-2021	120	12.8	3877.7	10.4
11	20-02-2021	115	12.2	3720.5	11.3
12	27-02-2021	132	13.3	3900.0	12.4
13	04-03-2021	128	11.7	3464.7	10.8
<b>Method</b>	IS 11255 (Part 3): 2008 RA 2008	IS 11255 (Part 3): 2008 RA 2008	IS 11255 (Part 3): 2008 RA 2008	IS 11255 (Part 1): 1985 RA 2009	

Norms: **Total Particulate Matter (PM)-100 mg/Nm<sup>3</sup>.**

### STACK EMISSION STATUS

**Location:- Flux Screening (Sinter Plant)**

Stack Identity	<b>Flux Screening (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	23-10-2020	49	6.06	18674.7	41.7
2	30-10-2020	46	6.23	19379.7	39.8
3	07-11-2020	43	5.9	18685.2	33.7
4	07-12-2020	38	6.15	19623.2	36.1
5	31-12-2020	41	5.90	18898.0	34.5
6	11-01-2021	44	6.24	19534.1	34.4
7	22-01-2021	48	6.07	18765.9	38.6
8	12-02-2021	41	6.18	19532.4	34.3
9	12-03-2021	49	6.3	19447.2	36.2
<b>Method</b>		IS 11255 (Part 3): 2008 RA 2008	IS 11255 (Part 3): 2008 RA 2008	IS 11255 (Part 3): 2008 RA 2008	IS 11255 (Part 1): 1985 RA 2009

Norms: Total Particulate Matter (PM)-100 mg/Nm<sup>3</sup>.

## STACK EMISSION STATUS

**Location:-Flux Crusher Sinter Plant**

Stack Identity	<b>Flux Crusher Sinter Plant</b>
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	23-10-2020	38	4.14	13207.3	28.1
2	30-10-2020	40	4.78	15151.1	25.3
3	07-11-2020	35	3.9	12563.0	20.5
4	07-12-2020	34	4.17	13475.9	22.9
5	31-12-2020	32	4.0	13141.8	18.5
6	11-01-2021	38	4.91	15662.6	15.3
7	22-01-2021	36	5.21	16726.5	17.2
8	12-02-2021	38	5.1	16395.7	21.4
9	12-03-2021	42	5.11	16092.8	17.8
<b>Method</b>	IS 11255 (Part 3): 2008 RA 2008	IS 11255 (Part 3): 2008 RA 2008	IS 11255 (Part 3): 2008 RA 2008	IS 11255 (Part 1): 1985 RA 2009	

Norms: **Total Particulate Matter (PM)-100 mg/Nm<sup>3</sup>.**

### STACK EMISSION STATUS

Stack Identity	DRP – 2 (Main)
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> )
1	04-10-2020	140	8.84	137570.4	40.8	3422.2	314.8
2	11-10-2020	146	8.55	131153.7	43.2	3964.1	306.4
3	21-10-2020	152	8.72	131867.7	46.2	3410.6	309.4
4	04-11-2020	148	8.50	129763.8	33.6	3899.2	363.4
5	12-11-2020	143	8.82	136263.7	37.7	3620.0	389.9
6	19-11-2020	152	9.19	138965.9	42.8	3464.6	335.4
7	25-11-2020	140	8.91	138661.6	43.6	3321.5	300.2
8	04-12-2020	147	8.83	135124.5	42.9	4331.4	337.9
9	10-12-2020	152	8.97	135648.3	44.5	4038.8	407.5
10	18-12-2020	142	8.47	131175.3	47.4	3459.9	282.0
11	29-12-2020	156	9.18	137518.5	43.1	3908.8	322.6
12	07-01-2021	140	8.91	138648.5	37.2	3613.8	245.1
13	15-01-2021	136	8.77	137812.1	41.3	3930.0	266.4
14	29-01-2021	146	9.14	140187.0	41.4	4047.3	273.1
15	04-02-2021	148	8.97	136924.2	44.3	3159.2	375.8
16	18-02-2021	145	8.88	136525.1	46.2	3440.2	353.3
17	25-02-2021	137	8.89	139349.5	42.8	3726.7	377.5
18	03-03-2021	152	9.26	140022.5	41.8	266.4	318.2



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Method	IS 11255 (Part 3): 2008 RA 2008	IS 11255 (Part 3): 2008 RA 2008	IS 11255 (Part 3): 2008 RA 2008	IS 11255 (Part 1): 1985 RA 2009	IS 11255 (Part 2):1985 RA 2014	IS 11255 (Part 7):2005 RA 2017
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Norms: **Total Particulate Matter (PM)- 50 mg/Nm<sup>3</sup>.**  
**Sulphur Dioxide – 4520 Kg/Day.**

### STACK EMISSION STATUS

Stack Identity	Product House (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	04-10-2020	43	14.9	47708.4	45.7
2	11-10-2020	45	15.3	48772.3	50.4
3	21-10-2020	44	15.3	48675.6	48.5
4	04-11-2020	42	14.0	45192.5	52.8
5	12-11-2020	44	13.1	42071.6	49.2
6	19-11-2020	47	13.7	43477.1	53.1
7	25-11-2020	40	12.6	40827.1	56.5
8	04-12-2020	38	13.6	44406.6	45.5
9	10-12-2020	40	13.5	43777.6	48.7
10	18-12-2020	43	14.4	46302.4	48.6
11	29-12-2020	45	12.9	41078.1	52.3
12	07-01-2021	47	13.6	43198.0	58.3
13	15-01-2021	45	13.2	42159.1	52.2
14	29-01-2021	42	12.6	40145.8	53.8
15	04-02-2021	48	13.1	41357.8	52.1
16	18-02-2021	43	13.5	43227.0	47.1
17	25-02-2021	51	12.9	40282.9	51.5
18	03-03-2021	52	12.9	40411.1	49.3
<b>Method</b>		IS 11255 (Part 3): 2008 RA 2008	IS 11255 (Part 3): 2008 RA 2008	IS 11255 (Part 3): 2008 RA 2008	IS 11255 (Part 1): 1985 RA 2009

Norms: **Total Particulate Matter (PM)- 100 mg/Nm<sup>3</sup>.**

**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--20	04-10-2020 to 05-10-2020	79.8	38.5	12.8	18.6
2		05-10-2020 to 06-10-2020	74.5	36.3	11.7	16.6
3		11-10-2020 to 12-10-2020	81.8	41.5	11.0	18.1
4		12-10-2020 to 13-10-2020	83.2	42.6	12.2	18.9
5		18-10-2020 to 19-10-2020	78.2	39.5	11.2	18.3
6		19-10-2020 to 20-10-2020	80.8	38.6	11.9	19.9
7		26-10-2020 to 27-10-2020	75.7	37.3	12.8	19.7
8		27-10-2020 to 28-10-2020	82.8	41.8	12.5	12.3
9	Nov--20	02-11-2020 to 03-11-2020	89.3	42.2	12.1	18.1
10		03-11-2020 to 04-11-2020	91.7	43.5	12.4	18.6
11		09-11-2020 to 10-11-2020	86.2	41.8	12.1	18.1
12		10-11-2020 to 11-11-2020	84.4	41.4	12.5	18.4
13		16-11-2020 to 17-11-2020	85.7	43.0	13.4	19.5
14		17-11-2020 to 18-11-2020	83.3	42.4	13.3	18.4
15		23-11-2020 to 24-11-2020	81.3	40.6	13.2	18.3
16		24-11-2020 to 25-11-2020	74.6	34.6	12.4	18.4
17	Dec-20	01-12-2020 to 02-12-2020	87.5	37.4	12.7	19.4
18		02-12-2020 to 03-12-2020	91.5	43.2	12.8	19.9

19		07-12-2020 to 08-12-2020	87.9	38.6	12.7	19.0
20		08-12-2020 to 09-12-2020	83.6	34.5	12.1	18.6
21		14-12-2020 to 15-12-2020	78.6	32.7	11.9	17.4
22		15-12-2020 to 16-12-2020	90.3	41.6	12.0	19.2
23		21-12-2020 to 22-12-2020	80.3	36.9	12.3	17.9
24		22-12-2020 to 23-12-2020	89.1	38.6	12.5	17.7
25		28-12-2020 to 29-12-2020	91.5	40.5	11.6	17.8
26		29-12-2020 to 30-12-2020	90.4	40.6	12.2	18.0
27	Jan-21	04-01-2021 to 05-01-2021	93.3	43.0	12.8	20.3
28		05-01-2021 to 06-01-2021	92.8	42.3	12.7	20.8
29		11-01-2021 to 12-01-2021	81.8	36.3	11.8	19.6
30		12-01-2021 to 13-01-2021	79.3	35.5	11.7	19.4
31		18-01-2021 to 19-01-2021	96.6	45.5	13.3	22.7
32		19-01-2021 to 20-01-2021	96.8	46.4	13.7	22.9
33		25-01-2021 to 26-01-2021	94.4	44.5	12.3	21.7
34		27-01-2021 to 28-01-2021	94.6	44.6	12.6	22.3
35	Feb-21	01-02-2021 to 02-02-2021	92.5	40.1	12.4	22.9
36		02-02-2021 to 03-02-2021	87.8	38.2	11.4	22.5
37		08-02-2021 to 09-02-2021	96.1	46.9	14.6	27.0
38		09-02-2021 to 10-02-2021	98.2	49.4	14.6	27.3
39		15-02-2021 to 16-02-2021	97.8	50.3	17.5	29.2
40		16-02-2021 to 17-02-2021	98.7	51.4	17.9	31.4
41		22-02-2021 to 23-02-2021	95.3	49.9	17.8	31.1
42		23-02-2021 to 24-02-2021	89.3	36.8	17.5	28.2

43	Mar-21	01-03-2021 to 02-03-2021	95.1	46.2	18.0	35.5
44		02-03-2021 to 03-03-2021	96.1	48.1	19.6	36.3
45		08-03-2021 to 09-03-2021	97.7	51.9	19.1	36.7
46		09-03-2021 to 10-03-2021	94.6	46.9	18.7	35.1
47		15-03-2021 to 16-03-2021	89.7	43.4	17.5	35.2
48		16-03-2021 to 17-03-2021	81.4	38.6	16.8	34.1
<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--20	04-10-2020 to 05-10-2020	84.4	40.4	14.5	20.8
2		05-10-2020 to 06-10-2020	83.6	40.2	15.2	22.9
3		11-10-2020 to 12-10-2020	87.4	44.4	15.6	22.4
4		12-10-2020 to 13-10-2020	90.2	45.9	15.2	21.4
5		18-10-2020 to 19-10-2020	93.4	46.5	16.5	20.5
6		19-10-2020 to 20-10-2020	95.5	47.2	16.5	22.4
7		27-10-2020 to 28-10-2020	85.7	44.8	14.8	21.6
8		28-10-2020 to 29-10-2020	77.0	35.8	14.2	19.3
9	Nov--20	03-11-2020 to 04-11-2020	89.2	46.3	15.2	23.5
10		04-11-2020 to 05-11-2020	92.7	47.3	15.4	24.4
11		09-11-2020 to 10-11-2020	90.2	44.5	15.1	24.4
12		10-11-2020 to 11-11-2020	94.5	49.5	16.1	25.6
13		17-11-2020 to 18-11-2020	91.4	45.4	16.5	26.7
14		18-11-2020 to 19-11-2020	90.8	46.3	16.5	27.1
15		24-11-2020 to 25-11-2020	88.5	44.7	16.4	26.1
16		25-11-2020 to 26-11-2020	89.7	45.6	16.7	26.9
17	Dec-20	01-12-2020 to 02-12-2020	90.5	44.1	16.6	27.1
18		02-12-2020 to 03-12-2020	95.5	47.9	17.4	29.2
19		08-12-2020 to 09-12-2020	97.4	48.4	19.2	32.3

20		09-12-2020 to 10-12-2020	96.8	47.3	19.3	32.8
21		15-12-2020 to 16-12-2020	96.8	47.3	18.6	31.5
22		16-12-2020 to 17-12-2020	98.6	47.6	19.7	32.7
23		22-12-2020 to 23-12-2020	94.8	45.5	18.4	29.7
24		23-12-2020 to 24-12-2020	83.0	36.5	18.5	26.2
25		28-12-2020 to 29-12-2020	98.3	47.7	19.9	33.3
26		29-12-2020 to 30-12-2020	88.2	42.5	19.5	30.5
27	Jan-21	05-01-2021 to 06-01-2021	81.6	35.7	18.8	26.9
28		06-01-2021 to 07-01-2021	78.8	35.0	18.1	26.8
29		12-01-2021 to 13-01-2021	99.1	49.2	21.5	32.6
30		13-01-2021 to 14-01-2021	96.1	47.6	20.7	31.5
31		19-01-2021 to 20-01-2021	97.8	50.5	22.3	33.7
32		20-01-2021 to 21-01-2021	98.7	52.2	26.3	38.3
33		25-01-2021 to 26-01-2021	89.2	44.6	22.3	28.7
34		27-01-2021 to 28-01-2021	96.7	48.5	21.5	29.6
35	Feb-21	02-02-2021 to 03-02-2021	91.6	44.9	21.2	33.4
36		03-02-2021 to 04-02-2021	97.0	52.6	27.4	38.8
37		09-02-2021 to 10-02-2021	95.2	48.7	20.3	28.1
38		10-02-2021 to 11-02-2021	97.0	48.9	23.1	32.8
39		16-02-2021 to 17-02-2021	87.1	43.3	22.8	32.6
40		17-02-2021 to 18-02-2021	97.0	51.8	26.8	36.2
41		23-02-2021 to 24-02-2021	97.6	50.8	29.5	37.1
42		24-02-2021 to 25-02-2021	96.6	50.5	28.3	36.9
43	Mar-21	02-03-2021 to 03-03-2021	96.4	50.9	28.0	41.6



44	03-03-2021 to 04-03-2021	97.7	51.0	28.5	42.3
45	09-03-2021 to 10-03-2021	96.0	49.0	27.1	44.7
46	10-03-2021 to 11-03-2021	93.3	46.6	28.5	45.5
47	16-03-2021 to 17-03-2021	81.1	38.5	21.2	31.4
48	17-03-2021 to 18-03-2021	77.0	35.8	19.5	29.3
<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--20	04-10-2020 to 05-10-2020	67.6	28.7	12.1	18.8
2		05-10-2020 to 06-10-2020	73.6	33.0	12.7	19.2
3		11-10-2020 to 12-10-2020	68.1	31.4	12.6	19.0
4		12-10-2020 to 13-10-2020	69.2	32.1	12.6	19.8
5		18-10-2020 to 19-10-2020	86.9	43.9	12.8	20.5
6		19-10-2020 to 20-10-2020	75.2	36.1	12.5	20.3
7		28-10-2020 to 29-10-2020	91.5	46.7	13.4	21.4
8		29-10-2020 to 30-10-2020	77.7	41.4	13.2	20.5
9	Nov--20	04-11-2020 to 05-11-2020	72.3	33.0	12.3	19.8
10		05-11-2020 to 06-11-2020	67.3	30.5	12.1	19.1
11		11-11-2020 to 12-11-2020	65.6	28.1	12.2	19.4
12		12-11-2020 to 13-11-2020	64.2	25.9	12.2	19.3
13		18-11-2020 to 19-11-2020	65.2	28.5	12.1	19.8
14		19-11-2020 to 20-11-2020	68.3	31.1	12.5	19.7
15		25-11-2020 to 26-11-2020	66.0	28.6	12.1	20.2
16		26-11-2020 to 27-11-2020	63.1	26.2	12.2	17.9
17	Dec--20	03-12-2020 to 04-12-2020	63.6	28.0	11.5	17.0
18		04-12-2020 to 05-12-2020	68.6	28.9	11.8	17.5
19		09-12-2020 to 10-12-2020	72.2	31.1	12.3	19.4
20		10-12-2020 to 11-12-2020	73.5	31.5	11.3	19.4
21		16-12-2020 to 17-12-2020	76.3	32.7	11.1	18.0

22		17-12-2020 to 18-12-2020	78.6	33.3	11.3	18.4
23		23-12-2020 to 24-12-2020	74.3	32.3	11.6	17.7
24		24-12-2020 to 25-12-2020	76.7	34.1	11.8	17.4
25		29-12-2020 to 30-12-2020	68.3	31.0	10.8	17.2
26		30-12-2020 to 31-12-2020	65.3	27.3	10.2	16.9
27	Jan-21	06-01-2021 to 07-01-2021	70.2	30.7	11.3	17.6
28		07-01-2021 to 08-01-2021	73.0	31.4	11.4	17.7
29		13-01-2021 to 14-01-2021	77.6	35.3	12.4	18.4
30		14-01-2021 to 15-01-2021	71.5	32.6	12.1	17.7
31		20-01-2021 to 21-01-2021	78.5	36.1	12.6	18.8
32		21-01-2021 to 22-01-2021	73.2	33.5	12.2	17.8
33		28-01-2021 to 29-01-2021	82.1	37.0	12.2	19.5
34		29-01-2021 to 30-01-2021	76.3	32.2	11.9	19.5
35	Feb-21	03-02-2021 to 04-02-2021	77.2	35.0	11.7	20.8
36		04-02-2021 to 05-02-2021	88.2	36.5	11.4	21.2
37		10-02-2021 to 11-02-2021	72.8	32.6	10.9	19.4
38		11-02-2021 to 12-02-2021	64.3	28.1	9.44	18.2
39		17-02-2021 to 18-02-2021	86.0	34.8	10.6	16.7
40		18-02-2021 to 19-02-2021	81.2	32.9	11.8	18.6
41		24-02-2021 to 25-02-2021	76.4	33.4	10.4	17.2
42		25-02-2021 to 26-02-2021	78.2	34.9	9.16	16.7



43	Mar-21	03-03-2021 to 04-03-2021	74.9	28.3	11.7	18.7
44		04-03-2021 to 05-03-2021	70.5	28.5	10.8	17.6
45		10-03-2021 to 11-03-2021	76.0	32.3	10.7	17.9
46		11-03-2021 to 12-03-2021	74.7	29.9	10.8	18.6
47		17-03-2021 to 18-03-2021	70.4	27.7	10.5	18.7
48		18-03-2021 to 19-03-2021	67.0	26.4	10.1	15.8
<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 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--20	04-10-2020 to 05-10-2020	64.4	29.9	10.8	19.9
2		05-10-2020 to 06-10-2020	71.9	35.9	11.3	19.3
3		11-10-2020 to 12-10-2020	59.0	26.0	9.16	17.7
4		12-10-2020 to 13-10-2020	66.2	31.9	9.14	18.2
5		18-10-2020 to 19-10-2020	67.1	33.4	9.25	18.0
6		19-10-2020 to 20-10-2020	68.3	32.5	9.69	17.4
7		29-10-2020 to 30-10-2020	70.1	38.9	10.1	17.9
8		30-10-2020 to 31-10-2020	74.5	41.8	10.3	18.4
9	Nov--20	05-11-2020 to 06-11-2020	72.5	39.8	10.8	18.5
10		06-11-2020 to 07-11-2020	73.6	40.7	11.5	18.5
11		11-11-2020 to 12-11-2020	71.2	40.5	10.1	17.8
12		12-11-2020 to 13-11-2020	68.5	39.5	9.16	18.9
13		19-11-2020 to 20-11-2020	70.3	35.6	10.6	19.5
14		20-11-2020 to 21-11-2020	73.6	35.5	11.7	19.1
15		26-11-2020 to 27-11-2020	69.7	33.6	9.13	18.9
16		27-11-2020 to 28-11-2020	74.9	39.1	9.57	17.8
17	Dec-20	03-12-2020 to 04-12-2020	76.2	37.2	9.51	18.7
18		04-12-2020 to 05-12-2020	78.2	37.8	10.8	18.7
19		10-12-2020 to 11-12-2020	77.5	36.3	9.57	19.5
20		11-12-2020 to 12-12-2020	74.6	33.2	9.55	19.8
21		17-12-2020 to 18-12-2020	74.6	32.3	10.4	19.5

22		18-12-2020 to 19-12-2020	76.6	33.1	10.2	19.5
23		24-12-2020 to 25-12-2020	68.6	31.6	10.6	19.1
24		25-12-2020 to 26-12-2020	63.7	28.5	10.1	19.8
25		29-12-2020 to 30-12-2020	71.4	32.8	11.3	18.5
26		30-12-2020 to 31-12-2020	75.4	34.1	11.7	19.4
27	Jan - 21	07-01-2021 to 08-01-2021	74.7	33.9	10.7	17.8
28		08-01-2021 to 09-01-2021	73.4	32.3	11.7	18.3
29		14-01-2021 to 15-01-2021	68.9	27.5	9.69	15.4
30		15-01-2021 to 16-01-2021	61.1	24.0	8.53	15.1
31		21-01-2021 to 22-01-2021	72.6	31.7	9.09	15.2
32		22-01-2021 to 23-01-2021	76.4	32.1	10.5	16.2
33		28-01-2021 to 29-01-2021	78.3	33.5	10.3	16.8
34		29-01-2021 to 30-01-2021	72.5	28.7	9.76	16.2
35	Feb-21	04-02-2021 to 05-02-2021	77.2	29.6	11.3	15.5
36		05-02-2021 to 06-02-2021	73.2	27.9	11.6	15.6
37		11-02-2021 to 12-02-2021	78.4	31.9	10.3	15.4
38		12-02-2021 to 13-02-2021	68.2	28.0	10.2	17.1
39		18-02-2021 to 19-02-2021	82.4	33.5	10.1	16.9
40		19-02-2021 to 20-02-2021	78.0	33.2	9.10	17.4
41		25-02-2021 to 26-02-2021	89.8	38.3	11.5	16.4
42		26-02-2021 to 27-02-2021	88.8	38.6	12.6	18.0
43	Mar-21	04-03-2021 to 05-03-2021	71.7	31.9	9.61	17.5
44		05-03-2021 to 06-03-2021	73.5	31.1	9.08	18.7
45		11-03-2021 to 12-03-2021	72.6	31.8	8.51	16.4

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46	12-03-2021 to 13-03-2021	73.5	32.1	8.69	17.5
47	18-03-2021 to 19-03-2021	66.6	25.0	10.4	17.5
48	19-03-2021 to 20-03-2021	61.9	23.5	8.99	17.8
<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**

October-2020	Hourly Average Noise Level dB (A)							
Location	1 <sup>st</sup>		2 <sup>nd</sup>		3 <sup>rd</sup>		4 <sup>th</sup>	
	04.10.2020		11.10.2020		18.10.2020		31.10.2020	
	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time
N-1 (Eklari Gate)	70.6	59.2	73.3	59.4	71.0	58.5	70.8	57.3
N-2 (Pump House-2) Near Water Reservoir	72.3	63.4	73.9	61.7	73.2	63.5	72.1	63.3
N-3 (STP)	52.6	46.3	53.7	49.1	54.7	46.5	52.5	49.2
N-4 (Guest House)	60.7	52.2	63.5	52.9	60.5	52.1	65.1	53.1
<b>Norms</b>	<b>75</b>	<b>70</b>	<b>75</b>	<b>70</b>	<b>75</b>	<b>70</b>	<b>75</b>	<b>70</b>

November-2020	Hourly Average Noise Level dB (A)							
Location	1 <sup>st</sup>		2 <sup>nd</sup>		3 <sup>rd</sup>		4 <sup>th</sup>	
	07-11-2020		13-11-2020		21-11-2020		28-11-2020	
	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time
N-1 (Eklari Gate)	70.7	59.1	73.3	63.1	70.2	59.2	70.1	60.0
N-2 (Pump House-2) Near Water Reservoir	72.5	61.4	71.6	63.0	71.8	60.7	73.9	63.3
N-3 (STP)	52.6	46.3	52.6	49.2	53.7	45.8	53.0	46.7
N-4 (Guest House)	63.8	52.1	63.4	52.2	64.3	53.3	60.7	50.6
<b>Norms</b>	<b>75</b>	<b>70</b>	<b>75</b>	<b>70</b>	<b>75</b>	<b>70</b>	<b>75</b>	<b>70</b>

December-2020	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>	
	05-12-2020		12-12-2020		19-12-2020		26-12-2020		31-12-2020	
	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time
<b>N-1 (Eklari Gate)</b>	70.6	59.5	73.3	63.1	71.4	59.2	70.6	58.5	72.2	63.4
<b>N-2 (Pump House-2) Near Water Reservoir</b>	73.9	63.4	72.1	63.4	71.8	62.7	68.8	57.8	70.4	59.1
<b>N-3 (STP)</b>	52.9	50.4	53.0	47.4	53.7	46.3	51.2	46.8	52.8	46.2
<b>N-4 (Guest House)</b>	63.7	52.8	64.2	53.2	62.9	53.2	65.1	52.6	63.8	52.9
<b>Norms</b>	<b>75</b>	<b>70</b>	<b>75</b>	<b>70</b>	<b>75</b>	<b>70</b>	<b>75</b>	<b>70</b>	<b>75</b>	<b>70</b>



January-2021		Hourly Average Noise Level dB (A)							
Location	1 <sup>st</sup>		2 <sup>nd</sup>		3 <sup>rd</sup>		4 <sup>th</sup>		
	09-01-2021		16-01-2021		23-01-2021		30-01-2021		
	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	
N-1 (Eklari Gate)	70.1	59.2	70.6	63.1	73.4	58.5	71.0	57.3	
N-2 (Pump House-2) Near Water Reservoir	72.1	63.9	70.2	59.4	71.7	62.7	70.5	63.9	
N-3 (STP)	54.7	47.8	52.6	49.0	53.0	49.2	52.6	46.7	
N-4 (Guest House)	65.1	53.1	62.9	52.6	64.2	53.7	63.9	52.2	
<b>Norms</b>	<b>75</b>	<b>70</b>	<b>75</b>	<b>70</b>	<b>75</b>	<b>70</b>	<b>75</b>	<b>70</b>	

February-2021		Hourly Average Noise Level dB (A)							
Location	1 <sup>st</sup>		2 <sup>nd</sup>		3 <sup>rd</sup>		4 <sup>th</sup>		
	06-02-2021		13-02-2021		20-02-2021		27-02-2021		
	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	
N-1 (Eklari Gate)	70.5	59.2	70.5	59.2	73.3	63.4	70.1	59.4	
N-2 (Pump House-2) Near Water Reservoir	72.2	63.4	73.9	63.4	70.5	59.2	71.8	62.7	
N-3 (STP)	53.2	46.7	52.6	47.3	53.0	49.2	52.9	45.8	
N-4 (Guest House)	63.9	53.1	71.4	59.2	70.6	58.9	63.8	52.9	
<b>Norms</b>	<b>75</b>	<b>70</b>	<b>75</b>	<b>70</b>	<b>75</b>	<b>70</b>	<b>75</b>	<b>70</b>	

Location	Hourly Average Noise Level dB (A)					
	1 <sup>st</sup>		2 <sup>nd</sup>		3 <sup>rd</sup>	
	06-03-2021		12-03-2021		20-03-2021	
	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time
N-1 (Eklari Gate)	71.0	57.3	71.4	59.1	53.5	49.9
N-2 (Pump House-2) Near Water Reservoir	72.5	63.4	73.2	63.5	53.0	48.4
N-3 (STP)	52.6	46.6	53.7	49.2	45.3	43.8
N-4 (Guest House)	60.5	52.6	61.3	53.0	58.7	51.2
<b>Norms</b>	<b>75</b>	<b>70</b>	<b>75</b>	<b>70</b>	<b>75</b>	<b>70</b>

**ANNEXURE-1. (D)**

**FUGITIVE DUST EMISSION MONITORING STATUS**

Sr. No.	LOCATION	Month	SPM ( $\mu\text{g}/\text{m}^3$ )	RSPM ( $\mu\text{g}/\text{m}^3$ )
1	Sinter Plant (Near Main Control Room Building)	Oct - 2020	1014.3	438.2
		Nov -2020	1883.6	893.3
		Dec – 2020	1679.6	793.5
		Jan – 2021	1344.4	718.0
		Feb. – 2021	1652.6	878.5
		March - 2021	1683.5	768.3
2	Raw Material Handling Area (Near Transfer Point)	Oct - 2020	1144.3	592.1
		Nov -2020	1929.1	1066.5
		Dec – 2020	1774.7	966.9
		Jan – 2021	1606.3	724.5
		Feb. – 2021	1730.6	893.3
		March - 2021	1544.3	714.6
3	SMS (Steel Melting Shop) ( Near Ladle Heating Furnace)	Oct - 2020	851.3	314.4
		Nov -2020	715.3	313.3
		Dec – 2020	1361.1	615.3
		Jan – 2021	1264.3	603.0
		Feb. – 2021	1350.8	655.4
		March - 2021	1344.1	684.2
4	MBF (Near Mini Blast Furnace)	Oct - 2020	945.2	604.5
		Nov -2020	899.0	445.7
		Dec – 2020	1685.3	730.6

		Jan – 2021	1372.2	654.7
		Feb. – 2021	1273.8	569.9
		March - 2021	1419.3	589.3
5	Raw Material Feed Area (Near Mixing Area )	Oct - 2020	1316.5	656.8
		Nov -2020	1235.8	609.8
		Dec – 2020	1355.7	623.2
		Jan – 2021	1453.9	706.3
		Feb. – 2021	1631.1	818.2
		March - 2021	--	--
6	DRP-2 (Near Coal Circuit Area)	Oct - 2020	1122.4	555.6
		Nov -2020	1177.2	560.9
		Dec – 2020	1554.0	836.9
		Jan – 2021	1759.3	791.6
		Feb. – 2021	1682.7	830.7
		March - 2021	--	--
<b>Norms</b>			<b>2000</b>	

**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-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	
1.	Total Suspended Solids	mg/l	38.0	48.0	16.0	22.0	18.0	38.0	50
2.	Biochemical oxygen demand(BOD at 27°C for 3 days)	mg/l	16.0	28.2	14.0	13.5	12.1	22.0	300

### 1.1 Location : E-1 (DRP Drain Effluent)

Sr. No.	Test Parameter	Measurement Unit	Test Results						Limit as per Consent Conditions
			Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	
1.	pH value	-	6.3	7.1	6.9	8.6	7.7	7.8	5.5 to 9.0
2.	Total Suspended Solids	mg/l	64.0	22.0	20.0	78.0	62.0	98.0	100
3.	Biochemical oxygen demand (BOD at 27°C for 3 days)	mg/l	2.0	2.7	2.6	3.4	3.0	3.7	100
4.	Chemical oxygen demand (COD)	mg/l	91.2	88.0	88.0	92.0	79.6	188.2	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	792.0	610.0	624.0	792.0	622.0	522.0	2100
7.	Chloride (as Cl)	mg/l	216.5	139.9	176.1	179.5	107.1	254.8	600
8.	Sulphate (as SO <sub>4</sub> )	mg/l	89.7	61.9	100.9	117.0	68.9	74.5	1000
9.	Iron (as Fe)	mg/l	0.44	0.27	0.24	0.30	0.35	0.47	3.0

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

Sr. No.	Test Parameter	Measurement Unit	Test Results						Limit as per Consent Conditions
			Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	
1.	pH value	-	7.6	7.1	8.6	8.1	7.4	7.9	5.5 to 9.0
2.	Total Suspended Solids	mg/l	14.0	28.0	22.0	56.0	24.0	94.0	100
3.	Biochemical oxygen demand (BOD at 27°C for 3 days)	mg / l	3.0	4.0	3.0	3.6	4.0	5.4	100
4.	Chemical oxygen demand (COD)	mg / l	99.2	112.0	112.0	104.0	136.0	156.8	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	392.0	348.0	490.0	342.0	440.0	262.0	2100
7.	Chloride (as Cl)	mg / l	149.9	119.9	164.2	133.2	152.3	66.1	600
8.	Sulphate (as SO <sub>4</sub> )	mg/l	33.7	37.0	36.8	40.1	40.1	39.0	1000

9.	Iron (as Fe)	mg/l	0.16	0.20	0.22	0.26	0.40	0.30	3.0
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### 1.3 Location : E-3 (Coal Washery)

Sr. No.	Test Parameter	Measurement Unit	Test Results						Limit as per Consent Conditions
			Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	
1.	pH value	-	8.9	7.4	8.1	8.6	8.3	8.7	5.5 to 9.0
2.	Total Suspended Solids	mg/l	98.0	94.0	52.0	58.0	48.0	90.0	100
3.	Biochemical oxygen demand (BOD at 27°C for 3 days)	mg /l	7.0	5.2	4.0	5.0	4.8	4.0	100
4.	Chemical oxygen demand (COD)	mg /l	166.6	144.0	136.0	128.0	159.3	218.2	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	610.0	848.0	874.0	810.0	416.0	618.0	2100
7.	Chloride (as Cl)	mg /l	95.2	119.9	111.8	160.1	64.2	480.2	600
8.	Sulphate (as SO <sub>4</sub> )	mg/l	92.8	162.0	156.1	127.2	43.7	137.6	1000
9.	Iron (as Fe)	mg/l	0.28	0.36	0.35	0.38	0.40	0.35	3.0

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

Sr. No.	Test Parameter	Measurement Unit	Test Results						Limit as per Consent Conditions
			Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	
1.	pH value	-	7.2	7.8	7.89	7.0	7.80	--	5.5 to 9.0
2.	Total Suspended Solids	mg/l	48.0	12.0	6.0	4.0	6.0	--	100
3.	Biochemical oxygen demand (BOD at 27°C for 3 days)	mg/l	4.0	3.0	3.0	3.6	2.8	-	100
4.	Chemical oxygen demand (COD)	mg/l	111.1	80.0	96.0	116.0	88.0	-	250
5.	Oil & Grease	mg/l	<0.2	<0.2	<0.2	<0.2	<0.2	-	10
6.	Total dissolved solids	mg/l	384.0	338.0	264.0	232.0	420.0	-	2100
7.	Chloride (as Cl)	mg/l	73.7	112.4	73.3	96.1	64.7	-	600
8.	Sulphate (as SO <sub>4</sub> )	mg/l	35.8	42.8	34.1	35.7	26.5	-	1000

9.	Iron (as Fe)	mg/l	0.22	0.18	0.16	0.18	0.16	-	3.0
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### 1.5 Location : E-5- Pickling ETP Outlet

Sr. No.	Test Parameter	Measurement Unit	Test Results						Limit as per Consent Conditions
			Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	
1.	pH value	-	7.1	6.8	7.5	6.9	7.7	-	5.5 to 9.0
2.	Total Suspended Solids	mg/l	12.0	10.0	12.0	26.0	18.0	-	100
3.	Biochemical oxygen demand (BOD at 27°C for 3 days)	mg/l	3.0	<2.0	<2.0	<2.0	<2.0	-	100
4.	Chemical oxygen demand (COD)	mg/l	83.3	116.0	76.0	96.0	104.0	-	250
5.	Oil & Grease	mg/l	<0.2	<0.2	<0.2	<0.2	<0.2	-	10
6.	Total dissolved solids	mg/l	552.0	576.0	408.0	450.0	590.0	-	2100
7.	Chloride (as Cl)	mg/l	92.8	109.9	99.9	168.2	171.3	-	600
8.	Sulphate (as SO <sub>4</sub> )	mg/l	8.89	13.8	13.2	50.5	27.9	-	1000
9.	Iron (as Fe)	mg/l	0.38	0.35	0.34	0.46	0.47	-	3.0

### 1.6 Location : E-6 Pickling Nala

Sr. No.	Test Parameter	Measurement Unit	Test Results						Limit as per Consent Conditions
			Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	
1.	pH value	-	7.2	6.5	7.9	6.9	7.4	7.4	5.5 to 9.0
2.	Total Suspended Solids	mg/l	88.0	64.0	56.0	96.0	64.0	88.0	100
3.	Biochemical oxygen demand (BOD at 27°C for 3 days)	mg/l	6.0	<2.0	<2.0	<2.0	<2.0	<2.0	100
4.	Chemical oxygen demand (COD)	mg/l	142.8	181.4	128.0	116.0	83.3	135.4	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	906.0	1866.0	702.0	580.0	678.0	572.0	2100



7.	Chloride (as Cl)	mg/l	304.6	569.8	221.3	192.2	109.9	124.9	<b>600</b>
8.	Sulphate (as SO <sub>4</sub> )	mg/l	51.5	84.9	37.7	42.8	29.4	43.6	<b>1000</b>
9.	Iron (as Fe)	mg/l	0.34	0.46	0.37	0.67	0.63	0.68	<b>3.0</b>

**1.7 Location : E-7 MBF ETP Outlet**

Sr. No.	Test Parameter	Measurement Unit							Limit as per Consent Conditions
			Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	
1.	pH value	-	7.5	7.1	7.4	7.6	7.2	7.3	<b>5.5 to 9.0</b>
2.	Total Suspended Solids	mg/l	52.0	32.0	78.0	44.0	36.0	96.0	<b>100</b>
3.	Biochemical oxygen demand (BOD at 27°C for 3 days)	mg/l	3.5	3.2	2.6	2.0	3.0	4.6	<b>100</b>
4.	Chemical oxygen demand (COD)	mg/l	87.3	164.0	92.0	84.0	100.0	152.9	<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	1328.0	1566.0	1400.0	1542.0	1820.0	1940.0	<b>2100</b>
7.	Chloride (as Cl)	mg/l	380.8	529.8	485.5	571.2	590.2	568.4	<b>600</b>
8.	Sulphate (as SO <sub>4</sub> )	mg/l	111.3	134.1	127.1	165.4	182.9	194.9	<b>1000</b>
9.	Iron (as Fe)	mg/l	0.30	0.46	0.48	0.39	0.38	0.35	<b>3.0</b>

**1.8 Location : E- 8 DRP Nala**

Sr. No.	Test Parameter	Measurement Unit	Test Results						Limit as per Consent Conditions
			Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	
1.	pH value	-	7.0	7.2	7.1	-	-	8.0	<b>5.5 to 9.0</b>
2.	Total Suspended Solids	mg/l	10.0	24.0	54.0	-	-	22.0	<b>100</b>
3.	Biochemical oxygen demand (BOD at 27°C for 3 days)	mg/l	3.0	3.0	5.40	-	-	3.0	<b>100</b>
4.	Chemical oxygen demand (COD)	mg/l	126.9	96.7	137.1	-	-	119.5	<b>250</b>
5.	Oil & Grease	mg/l	<0.2	<0.2	<0.2	-	-	<0.2	<b>10</b>
6.	Total dissolved solids	mg/l	818.8	740.0	1412.0	-	-	538.0	<b>2100</b>
7.	Chloride (as Cl)	mg/l	180.8	207.4	388.2	-	-	62.4	<b>600</b>
8.	Sulphate (as SO <sub>4</sub> )	mg/l	132.5	127.2	144.5	-	-	47.7	<b>1000</b>
9.	Iron (as Fe)	mg/l	0.39	0.32	0.46	-	-	0.39	<b>3.0</b>

**Location : E- 9 A.B. Type Area (Coinage Pond)**

Sr. No.	Test Parameter	Measurement Unit	Test Results						Limit as per Consent Conditions
			Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	
1.	pH value	-	-	-	7.5	-	-	-	5.5 to 9.0
2.	Total Suspended Solids	mg/l	-	-	18.0	-	-	-	100
3.	Biochemical oxygen demand (BOD at 27°C for 3 days)	mg/l	-	-	3.6	-	-	-	100
4.	Chemical oxygen demand (COD)	mg/l	-	-	80.0	-	-	-	250
5.	Oil & Grease	mg/l	-	-	<0.2	-	-	-	10
6.	Total dissolved solids	mg/l	-	-	350.0	-	-	-	2100
7.	Chloride (as Cl)	mg/l	-	-	103.3	-	-	-	600
8.	Sulphate (as SO <sub>4</sub> )	mg/l	-	-	30.2	-	-	-	1000
9.	Iron (as Fe)	mg/l	-	-	0.46	-	-	-	3.0

## Annexure- 2

Sl. No.	CSR Activity	Actual Expenditure during the financial year 2019-20 and during 2020-21 ( <u>up to</u> <u>31.03.2021</u> )	Budget allocation for the next 5 years
		(Rs. in lakh)	(Rs. In lakh)
A	Promotion of Health Care	99.59	
B	Education - Training & Skill Development	46.72	
C	Rural Development:-	37.84	
i	Construction of Rural Roads	12.69	
ii	Drinking Water and Sanitation	18.14	
iii	Environment Sustainability and protection of Flora & Fauna	17.23	
iv	Social Welfare Activities :- Participation in Swatch Bharat, Promoting Sports and Cultural activities	34.04	
D	Disaster Management - Relief under COVID 19 Pandemic	99.59	
E	Irrigation - Belgaon nearby villages	148.13	
TOTAL (*)		414.36	

(\*) - Details given below

**Details of CSR Expenditure for the year 2019-20 and for the first 4 Quarters of 2020-21**

(AMOUNT IN Rs.)

Particulars	2019-20	During Quarter ended 30 <sup>th</sup> June, 2020	During Quarter ended 30 <sup>th</sup> Sep. 2020	During Quarter ended 31 <sup>st</sup> Dec. 2020	During Quarter ended 31 <sup>st</sup> Mar. 2021	Total
Health care	3933570	5000000	-	1025000	-	9958570
Education - Training & Skill Development	3132006	294433	181694	799133	265129	4672395
Rural Development:-						
(i) Drinking Water and Sanitation	3552807	231020	-	-	-	3783827
(ii) Construction of Rural Roads	862029	-	351489	55002	-	1268520
(iii) Environment Sustainability & protection of Flora and Fauna	1709516	-	41646	62555	-	1813717
(iv) Participation in Swatch Bharat, Promoting Sports and Cultural activities	1647745	10000	64813	-	-	1722558
Disaster Management - Relief under COVID 19 Pandemic	0	3384949	19000	-	-	3403949
Irrigation - Belgaon nearby villages	-	-		14812445	-	14812445
<b>TOTAL</b>	<b>14837673</b>	<b>8920402</b>	<b>658642</b>	<b>16754135</b>	<b>265129</b>	<b>41435981</b>