

Poll/Six Mon/FC-2/9-A/ 2912  
Date : 21.11.2024



To,

**The Member Secretary (IA-II)**  
**IA Division (Industry I)**  
Ministry of Environment, Forest and Climate Change  
Indira Paryavaran Bhavan, Aliganj  
New Delhi - 110 003

Bhandara Road, Warthi, Bhandara - 441 905  
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CIN No.: L27100MH1984PLC034003  
GSTIN NO.: 27AACC33376C1ZH

**Subject : Six Monthly Compliance Report of the Environment Clearance**  
**(Period 01<sup>st</sup> Apr - 2024 to 30<sup>th</sup> Sep - 2024)**

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

Dear Sir,

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

Hope you will find it in order.

Thanking you.

Yours faithfully.

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

**Ramchandra Dalvi**  
Director-Technical

**Encls :** as above

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

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**EC COMPLIANCE REPORT  
&  
ENVIRONMENTAL STATUS REPORT  
(Apr- 2024 - Sep - 2024)  
of  
SUNFLAG IRON & STEEL CO. LTD.**

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

***Project Proponent:***



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

## SIX MONTHLY COMPLIANCE REPORT

### PART I : DATA SHEET

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

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

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



		<p>Metal, Ingot /Billets, Rolled steel Products and Sinter Plant and Rs. 54.93 crores for Modernization and addition in configuration of integrated steel plant [ Modernization-Cryogenic Oxygen plant replaced by VPSA oxygen plant ; Addition-Combustor installation 9.5 MW ( as an alternate to 500 TPD DRI Kiln)] without any change in total production of steel, after getting EC vide No.J-11011/355/2004- IA.II (I) dated 09.11.2020, Total expenditure on completion of this Modernization &amp; addition in configuration at cost of Rs.55.02 crores.</p>
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b. Allocations made for Environmental Management Plan with item wise & year wise breakup.	At present under existing unit following expenditure has already been made towards environmental protection, the same are as follows.			
	S.N.	Environmental Component	Capital Cost incurred so far ( Rs. in Lacs)	Recurring Cost per annum ( Rs. in Lacs)
	1.	Air Pollution Control (ESP's, Bag filters, water cooled ducts,GCP, ACGC,Silos, stacks,online monitoring system for ambient and stack)	5651.0	1273
	2.	Water Pollution Control (ETP's, STP, WTP, Neutralization tanks and allied equipments, online effluent monitoring system)	185.0	1030
	4.	Noise Pollution Control (acoustic enclosers,instruments for noise measurement & predictive maintenance, CBM instruments)	25.0	10
	5.	Environment Monitoring and Management (regular monitoring of Environmental parameters as per statutory requirement)	112.0	84
	6	Occupational Health	45	14.74
	7	Green Belt	50.0	33
	8	Online Stack Monitoring System	39.0	20
	9	Online Effluent Monitoring system	11.0	14
	10	Others (Pl. Specify)	20.0	20
c. Benefit Cost Ratio / Internal rate of Return and the year of assessment.	Not Applicable.			
d. Whether (c) includes the cost of Environmental Management as	Not applicable			



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



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

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**EC COMPLIANCE REPORT  
&  
ENVIRONMENTAL STATUS REPORT  
(Apr-2024 -Sep-2024)**

**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, MoEFCC has granted for the expansion of the existing integrated steel plant from existing 0.20 million TPA to 0.50 Million TPA. In the year 2017, MoEFCC has granted for the expansion of the existing integrated steel plant from existing 0.5 million TPA to 1.0 Million TPA

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

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

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

**Period:** From 1<sup>st</sup> Apr - 2024 to 30<sup>th</sup> Sep- 2024.

**(A) SPECIFIC CONDITIONS:**

Sr No	Conditions	Compliance
i)	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>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>



	<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.</p> <p>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.</p> <p>Online continuous ambient air quality monitoring system has been installed at three locations.</p> <p>On line continuous monitoring system has been installed in stacks to monitor SPM &amp; SO2.</p> <p>The emissions from the stacks and various units meet the prescribed standards results.</p> <p>Please refer <b>Annexure -1 (A)</b></p>
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ii)	<p>In plant control measures for checking fugitive emission from all the vulnerable sources like spillage/raw materials/coal handling etc. shall be provided. Further, specific measures like provision of dust suppression system consisting of water sprinkling, suction hoods, fans and bag filters etc. shall be installed at material transfer points, blast furnace stock house and other enclosed raw material handling areas.</p> <p>Centralized De-dusting system i.e. collection of fugitive emission through suction hood and subsequent treatment through bag filter or any other device and finally emitted through a stack of appropriately designed height conforming to the standards for induction furnaces existing in the industry and proposed induction and are furnaces. Fugitive emissions shall be regularly monitored and records maintained.</p>	<p>At the vulnerable fugitive emission sources like spillage/raw materials/coal handlings etc., in plant centralized de-dusting facility provided. The plant has provided dust suppression system consisting of water sprinklers, suction hood, Covered shed and conveyor, bag filters at various points such as material transfer points, and other enclosed raw material handling areas in the existing plant.</p> <p>Fugitive emissions are being regularly monitored and maintained the records as per guidelines.</p>
iii)	<p>The company shall install Waste Heat recovery Boilers (WHRB) to recover the waste heat and generate power from the steam produced by the WHRB. Char shall be used in the power plant. The particulate emissions from the WHRB and Direct Reduction Iron (DRI) plant shall be controlled by installation of ESP as per the CPCB specifications and particulate emissions shall not exceed 50 mg/Nm<sup>3</sup>. Further, the company shall install bag filters to control gaseous emissions 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>

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



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

vii)	Mill scale shall be reused in Sinter plant, ESP fly ash shall be made available to the cement plants and brick making plants whereas bottom ash shall be disposed off in a suitably designed landfill as per CPCB guidelines to prevent leaching to the sub-soil and underground aquifer. Solid waste generated in the form of Iron ore fines, blast furnace slag, BF scrap scales from slab caster and scales from steel mill will be sold to the scrap dealers except for BF slag which will be sold to the cement manufacturers.	Mill scale is used in the Sinter plant. Fly ash is used in brick making plants and bottom ash is disposed off at designated landfill. BF Slag is disposed off by sale to cement manufacturers. Iron ore fines, BF Scrap scales from slab caster and scales from steel mill are used at Sinter plant.
viii)	The company shall be developing surface water harvesting structure to harvest the rain water for utilization in the lean season besides recharging the ground water table.	Rain water harvesting ponds are existing in the plant premises and channels are provided for collection of rain water of the plant into the pond. The collected rain water is utilized for various plant activities in lean season. Also it helps in recharge of ground water table.
ix)	Green belt shall be developed in at least 71.5 ha area within and around the plant premises as per the CPCB guidelines in consultation with DFO.	<p>Sunflag Iron &amp; Steel Co. Ltd. has 200 Ha of land covering factory, colony and other amenities. Presently, land available for green belt is about 72 Ha and green belt has covered the maximum portion of land.</p> <p>From the last two decade, factory is regularly carrying out tree plantation and green belt development within the factory and colony premises as per CPCB guidelines. Till date, the factory has planted approx 6,34,758 trees covering various 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 90 %. The green belt is spread in and around the plant area.</p>
x)	Occupational health Surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	Medical examinations of workers are carried out regularly. A dispensary with regular medical practitioner and auxiliary nursing facility is available in the plant premises. Additionally, a panel of doctors regularly visits to the factory for checkup the health of workers & staff, the records of same is being maintained.

<b>xi)</b>	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.
<b>xii)</b>	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
<b>i</b>	The project authorities must strictly adhere to the stipulations made by the Maharashtra Pollution Control Board (MPCB) and the State Government.	Consent to Operate is obtained from Maharashtra Pollution Control Board for existing set-up and it is valid up to 31-05-2028. Compliance of the stipulations indicated in the MPCB Consent to Operate, are regularly complied.
<b>ii</b>	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.
<b>iii</b>	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 analysing pollution sources. The programme includes stack sampling, ambient air quality monitoring, noise level measurement , fugitive dust monitoring and treated effluent at various locations. The plant is regularly submitting the monitored data to MPCB.  Please refer <b>Annexure - 1 (A to E)</b> .

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

<b>vi</b>	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).	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.  The report of the monitored noise level data please refer <b>Annexure – 1 C.</b>
<b>vii</b>	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.	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 socio economic 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 check up camps.
<b>viii</b>	As committed, Project authorities shall provide funds of Rs. 20.54 Crores recurring and non-recurring to implement the conditions stipulated by the Ministry of Environment and Forest as well as the State Government along with the implementation schedule for all the conditions stipulated herein. The funds so provided should not be diverted for any other purpose.	In order to implement the conditions stipulated by the Ministry of Environment and Forests, Govt. of India as well as the Maharashtra Government, factory has carried out capital expenditure on pollution control facilities and providing adequate funds for capital & recurring expenditure.
<b>ix</b>	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.	Noted.  Six monthly EC compliance report is being submitted on regular basis.

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> Apr - 2024 to 30<sup>th</sup> Sep - 2024.

**(A) SPECIFIC CONDITIONS :**

Sr No	Conditions	Compliance
i)	The project proponent shall install 24x7 air monitoring devices to monitor air emissions, as provided by the CPCB and submit report to Ministry and its Regional Office.	Complied.
ii)	The canal passing through the project site should be fenced on both the sides, leaving a passage for maintenance related activities by the concerned department. No effluent should be discharged into the canal. No water from the canal should be abstracted without permission.	Complied.
iii)	The natural drainage passing through the site should not be disturbed or diverted and no solid waste or liquid effluent should be discharged into the drain.	Complied.
iv)	A statement on carbon budgeting including the quantum of equivalent Co <sub>2</sub> 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 Co <sub>2</sub> 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)	For the employees working in high temperature zones falling in the plant operation areas, the total shift duration would be 4 hrs or less per day where the temperature is more than 50°C. Moreover, the jobs of these employees will be alternated in such a way that no employee is subjected to working in high temperature area for more than 1 hr continuously. Such employees would be invariably provided with proper protective equipments, garments and gears such as head gear, clothing, gloves, eye protection etc.	Complied.
vi)	Continuous stack monitoring facilities for all the stacks shall be provided and sufficient air pollution control devices viz. Electrostatic precipitator (ESP), bag house, bag filters etc. shall be provided to keep the emission levels below 50 mg/Nm <sup>3</sup> and installing energy efficient technology.	Complied.
vii)	Efforts shall further be made to use maximum water from the rain water harvesting sources. Use of air cooled condensers shall be explored and closed circuit cooling system shall be provided to reduce water consumption and water requirement shall be modified accordingly. All the effluent should be treated and used for ash handling, dust suppression and green belt development. A revised water balance statement should be submitted by the Project Proponent with the 6 monthly compliance report.	Complied.
viii)	All the coal fines and char shall be utilized within the plant and no char shall be used for briquette making or disposed off anywhere else. Scrap shall be used in steel melting shop (SMS) and SMS slag and kiln accretions shall be properly utilized. All the other solid waste including broken refractory mass shall be properly disposed off in environment-friendly manner.	Complied .

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.	Complied, 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.	Complied, 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.	Comp[lied], 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.

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

xxii)	<p>The proponent shall prepare a detailed CSR Plan for every year for the next 5 years for the existing-cum-expansion project, which includes village-wise, sector-wise (Health, Education, Sanitation, Health, Skill Development and infrastructure requirements such as strengthening of village roads, avenue plantation, etc) activities in consultation with the local communities and administration. The CSR Plan will include the amount of 2% retain annual profits as provided for in Clause 135 of the Companies Act, 2013 which provides for 2% of the average net profits of previous 3 years towards CSR activities for life of the project. A separate budget head shall be created and the annual capital and revenue expenditure on various activities of the plan shall be submitted as part of the Compliance Report to RO. The details of the CSR Plan shall also be uploaded on the company website and shall also be provided in the annual report of the company.</p>	<p>The Budget for spending under CSR activities for the year 2023-24 was Rs. 2,50,00,000/- as per the CSR Policy of the Company.</p> <p>The details of CSR expenditure incurred has been published in the Annual Report 2023-2024.</p> <p>As per Section 135 of the Companies Act, 2013, the amount required to be spent on Corporate Social Responsibility (CSR) activities for the financial year is derived by formula i.e. 2% of the average net profits of the Company for immediately three (3) preceding financial years.</p> <p>As per this clause xxii, the CSR budget for the future five (5) years is required, which at this point of time is neither possible nor permitted to be arrived at as this is a future event. However, the same can be furnished on the yearly basis after adoption of the Audited Annual Accounts by the Board of Directors of the Company, which may kindly be noted.</p> <p>Please refer <b>Annexure 2</b></p>
xxiii)	<p>The Company shall submit within three months their policy towards Corporate Environment Responsibility which shall inter-alia address</p> <p>(i) Standard operating process/procedure to 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>
xxiv)	<p>The project proponent shall provide for solar light system for all common areas, street lights,villages, parking around project area and maintain the same regularly.</p>	<p>Partly Complied .</p>

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

**(B) General Conditions : -**

S.No.	Conditions	Compliance
i)	The project authorities must strictly adhere to the stipulations made by the Maharashtra Pollution Control Board and the State Government.	Noted and complied.
ii)	No further expansion or modifications in the plant should be carried out without prior approval of the Ministry of Environment and Forests and Climate Change (MoEF & CC).	Noted
iii)	At least four ambient air quality monitoring stations should be established in the downward direction as well as where maximum ground level concentration of PM10,PM2.5 SO2 and NOx are anticipated in consultation with the SPCB. Data on ambient air quality and stack emission should be regularly submitted to this Ministry including its Regional office at Nagpur and MPCB/CPCB once in six months.	Complied.

iv)	Industrial waste water shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19 <sup>th</sup> May, 1993 and 31 <sup>st</sup> December, 1993 or as amended from time to time the treated waste water shall be utilized for plantation purpose.	Complied.  Industrial waste water collected and treated at ETP, maintained parameters within permissible limit of CPCB & SPCB.
v)	The overall noise levels in and around the plant area shall be kept well within the standards (85 dBA) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels should conform to the standards prescribed under EPA Rules, 1989 viz. 75 dBA (daytime) and 70 dBA (night time).	Complied.
vi)	Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	Complied .
vii)	The company shall develop rain water harvesting structures to harvest the rain water for utilization in the lean season besides recharging the ground water table.	Complied.  Rain water harvesting ponds are made in the plant premises and channels are provided for collection of rain water of the plant into the pond. The collected rain water is utilized for various plant activities in lean season. Also it helps in recharge of ground water table.
viii)	The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA / EMP report. Further, the company must undertake socioeconomic development activities in the surrounding villages like community development programmes, educational programmes, drinking water supply and health care etc.	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 socio economic 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 check up 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 <b>Annexure 2</b> .

x)	A copy of clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parishad/Municipal Corporation, Urban Local Body and the local NGO, if any, from whom suggestions/representations, if any, were received while processing the proposal. The clearance letter shall also be put on the web site of the company by the proponent.	Complied.
xi)	The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of the MOEFCC at Nagpur. The respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; PM10, SO2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.	Complied.
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
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.

**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> Apr - 2024 to 30<sup>th</sup> Sep - 2024.

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

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

	be provided at SMS Converters.	Primary and Secondary Fume Extraction cum dust collection system has been provided at SMS Converters, Electric arc furnace(EAF) and Laddle Heat Furnace (LHF) to control the emissions from Steel Melt Shop area. Refer our compliance report submitted to your office vide letter No.Poll/MoEFCC/FC-2/3A/2724 dtd 24.03.2022
v	The project proponent use leak proof trucks/dumpers carrying coal and other raw materials and cover them with tarpaulin.	Complied.  Sunflag already using leak proof trucks / dumpers for carrying coal and other raw materials and cover them with tarpaulin. Refer our compliance report submitted to your office vide letter No.Poll/MoEFCC/FC-2/3A/2724 dtd 24.03.2022
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)	Not applicable, as we have not installed coke oven plant .  However, we have full fledged spillage collection facilities are provided for coal and coke through mechanized mobile equipments like Bobcat, Tata ACE Tipping to collect spillage etc. The industrial vacuum cleaning facility is also provided for road sweeping and plant floor dust collection on daily basis. Refer our compliance report submitted to your office vide letter No.Poll/MoEFCC/FC-2/3A/2724 dtd 24.03.2022
vi	The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as a mended subsequently and put on the website of the company.	Complied.  Copy of Environmental statement for each financial year in Form-V has been submitted on regular basis to the Maharashtra Pollution Control Board , also submitted to MoEFCC along with Six Monthly compliance report regularly . also put on the website of the company. Form V for last financial year ( April-2020 to March-2021) Refer our compliance report submitted to your office vide letter No.Poll/MoEFCC/FC-2/3A/2724 dtd 24.03.2022 & also submitted for financial year 2022-2023 on dated 18.08.2023 & 2023-2024 on dated 30.09.2024.

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

	Environment (Protection) Act, 1986 and NABL accredited laboratories	adjacent areas through labs recognised under Environment (Protection) Act, 1986 and NABL accredited laboratories.  Refer our compliance report submitted to your office vide letter No.Poll/MoEFCC/FC-2/3A/2724 dtd 24.03.2022
iii	The project proponent shall provide the ETP for coke oven to meet the standards prescribed in G.S.R 277 (E) dated 31st March 2012 (Integrated iron & Steel); G.S.R 414 (E) dated 30th May 2008 (Sponge Iron) as amended from time to time; S.O. 3305 (E) dated 7thDecember 2015 (Thermal Power Plants) as amended from time to time as amended from time to time	Not applicable, as we have not installed Coke Oven Plant.
iv	Adhere to 'Zero Liquid Discharge'	Complied.  'Zero Liquid Discharge' has been implemented.  100% of any effluent generated in the plant is reused/ recycled.
v	Sewage Treatment Plant shall be provided for treatment of domestic waste water to meet the prescribed standards.	Complied.  Sewage Treatment Plant are already provided for treatment of domestic waste water, parameters maintained within prescribed standards. The STP photo with analysis reports. Refer our compliance report submitted to your office vide letter No.Poll/MoEFCC/FC-2/3A/2724 dtd 24.03.2022
vi	Garland drains and collection pits shall be provided for each stock pile to arrest the run- off in the event of heavy rains and to check the water pollution due to surface run off.	Garland drains and collection pits for stock piles work is under progress.
vii	Tyre washing facilities shall be provided at the entrance/exit of the plant gates.	Tyre washing facilities work is under progress.
viii	CO2 injection shall be provided in GCP of SMS to reduce pH in circulating water to ensure optimal recycling of treated water for converter gas cleaning	SMS have Primary and Secondary Fume / Dust Extraction System with high capacity bag filters & suction blowers. Working efficiently and maintain the emissions within prescribed limits.
ix	Water meters shall be provided at the inlet to all unit processes in the steel plants.	Complied.  Water meters are already provided at the inlet to all unit processes in the steel



		plants. Refer our compliance report submitted to your office vide letter No.Poll/MoEFCC/FC-2/3A/2724 dtd 24.03.2022
x	The project proponent shall make efforts to minimize water consumption in the steel plant complex by segregation of used water, practicing cascade use and by recycling treated water	Complied.  Water consumption maintained at minimum level by recycling of waste water after treatment. Treated waste water is being used in process as a make up to Sinter, DRP, MBF / SMS slag quenching, Rolling mill etc.
<b>IV</b>	<b>Noise monitoring and prevention</b>	
i	Noise quality shall be monitored as per the prescribed Noise Pollution (Regulation and Control) Rules, 2000 and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report	Complied.  Noise level is being monitored on regular basis and maintained as per the prescribed Noise Pollution (Regulation and Control) Rules, 2000 and report in this regard is being submitted to MoEFCC Regional Office of the Ministry as a part of six-monthly compliance report. Refer our compliance report submitted to your office vide letter No.Poll/MoEFCC/FC-2/3A/2724 dtd 24.03.2022
<b>V</b>	<b>Energy Conservation measures</b>	
i	Energy conservation measures may be adopted such as adoption of solar energy and provision of LED lights etc., to minimize the energy consumption	Complied.  Energy conservation measures has been adopted by providing solar street lights, and replacement of all lights with LED lights and up gradation in electrical control system etc. thus minimize the energy consumption. Refer our compliance report submitted to your office vide letter No.Poll/MoEFCC/FC-2/3A/2724 dtd 24.03.2022
<b>VI</b>	<b>Waste management</b>	
i	An attrition grinding unit to improve the bulk density of BF granulated slag from 1.0 to 1.5 Kg/l shall be installed to use slag as river sand in construction industry.	Our entire BF slag is being sold to Cement industries like ACC cement, Emami Cement, Ambhuja cement etc. BF slag is utilized for manufacturing of slag cement in cement industries. Refer our compliance report submitted to your office vide letter No.Poll/MoEFCC/FC-2/3A/2724 dtd 24.03.2022
ii	In case of Non-Recovery coke ovens, the gas main carrying hot flue gases to the	At present not applicable, as we have not



	boiler, shall be insulated to conserve heat and to maximize heat recovery.	installed Coke Oven Plant.
iii	Carbon recovery plant to recover the elemental carbon present in GCP slurries for use in Sinter plant shall be installed.	100% GCP slurry is being used at Sinter plant.
iv	Used refectories shall be recycled as far as possible.	Complied.  Used refectories is being recycled, Buyback system is adopted with refractory suppliers / manufacturers.. Refer our compliance report submitted to your office vide letter No.Poll/MoEFCC/FC-2/3A/2724 dtd 24.03.2022
v	100% utilization of fly ash shall be ensured. All the fly ash shall be provided to cement and brick manufacturers for further utilization and Memorandum of Understanding in this regard shall be submitted to the Ministry's Regional Office	Complied.  Fly ash is used for in house manufacturing of fly ash bricks & paver blocks and also sold to brick manufacturers. Refer our compliance report submitted to your office vide letter No.Poll/MoEFCC/FC-2/3A/2724 dtd 24.03.2022
vi	Oil Collection pits shall be provided in oil cellars to collect and reuse/recycle spilled oil. Oil collection trays shall be provided under coils on saddles in cold rolled coil storage area.	Complied.  Oil Collection pits are provided in oil cellars to collect and reuse/recycle spilled oil. Oil collection trays are provided.  Refer our compliance report submitted to your office vide letter No.Poll/MoEFCC/FC-2/3A/2724 dtd 24.03.2022
vii	Kitchen waste shall be composted or converted to biogas for further use.	Complied.  Kitchen waste compost machine has been installed at our Nursery and compost is being used for nursery / plantation. Refer our compliance report submitted to your office vide letter No.Poll/MoEFCC/FC-2/3A/2724 dtd 24.03.2022
<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.  The existing Green belt has been developed in an area equal to 33%( I.e.72 Hectare) of the plant area with a native tree species in accordance with CPCB guidelines. The greenbelt are inter alia cover the entire periphery of the plant,

		Total plantation has been done till date 6,34,758 nos, will also be increased the green belt wherever possible in the project area, 25 Miyawaki sites of each site 500-600 feet square plot has been earmarked at different location of plant.
ii	The project proponent shall prepare GHG emissions inventory for the plant and shall submit the programme for reduction of the same including carbon sequestration including plantation.	<p>GHG emissions of Sunflag steel was accounted and submitted for previous year and for 2020-2021, a statement of carbon budgeting and amount of carbon sequestered by the existing green belt is calculated Refer our compliance report submitted to your office vide letter No.Poll/MoEFCC/FC-2/3A/2724 dtd 24.03.2022 also submitted to MoEFCC website on 30.11.2024.</p> <p>Adequate green belt have been developed in and around the plant to reduce the Co2 emissions. Existing green belt found to be good, also increase the green belt by planting maximum trees along the railway line, waste dump area, loading &amp; unloading area etc and wherever possible.</p>
<b>VIII</b>	<b>Public hearing and Human health issues</b>	
i	Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.	<p>Complied.</p> <p>Emergency plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan has been prepared and submitted along with six monthly compliance report. Refer our compliance report submitted to your office vide letter No.Poll/MoEFCC/FC-2/3A/2724 dtd 24.03.2022</p> <p>Mock drills and awareness programme for the employees are conducted periodically. Refer our compliance report submitted to your office vide letter No.Poll/MoEFCC/FC-2/3A/2724 dtd 24.03.2022</p>
ii	The project proponent shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protection Equipment (PPE) as per the norms of Factory Act	<p>Complied.</p> <p>Heat stress analysis for the workmen who work in high temperature work zone has been carried out, accordingly shift duration</p>

		for the employees working in high temperature zone have been followed. and also provided Personal Protection Equipment (PPE) as per the norms of Factory Act.Refer our compliance report submitted to your office vide letter No.Poll/MoEFCC/FC-2/3A/2724 dtd 24.03.2022
iii	Occupational health surveillance of the workers shall be done on a regular basis and records maintained	Complied.  Medical examinations of workers are carried out regularly. A dispensary with regular medical practitioner and auxiliary nursing facility is available in the plant premises. Additionally, a panel of Doctors regularly visits to the factory for check up the health of workers and Staff. Refer our compliance report submitted to your office vide letter No.Poll/MoEFCC/FC-2/3A/2724 dtd 24.03.2022
<b>IX</b>	<b>Corporate Environment Responsibility</b>	
i	The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.	Complied.  Company has submitted Environment policy duly approved by Board of Directors towards CER along with previous compliance report.  Refer our compliance report submitted to your office vide letter No.Poll/MoEFCC/FC-2/3A/2724 dtd 24.03.2022
ii	A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization	Complied, separate Environmental Cell with qualified personnel has been provided under Section Head & control under Director-Technical and Chief Operating Officer.  Refer our compliance report submitted to your office vide letter No.Poll/MoEFCC/FC-2/3A/2724 dtd 24.03.2022
<b>X</b>	<b>Miscellaneous</b>	

i	The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently	<p>Complied. Advertisement have been made in the local news paper within prescribed period &amp; also displayed in the Sunflag Company website.</p> <p>Refer our compliance report submitted to your office vide letter No.Poll/MoEFCC/FC-2/3A/2724 dtd 24.03.2022</p>
ii	The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.	<p>Complied. Copies of EC has been submitted to Local bodies, Gram Panchayat samiti etc..</p> <p>Refer our compliance report submitted to your office vide letter No.Poll/MoEFCC/FC-2/3A/2724 dtd 24.03.2022</p>
iii	The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.	<p>Complied. Copies of environment clearance letter, results of monitoring data report are uploaded on Sunflag company website link at <a href="https://sunflagsteel.com/1695-2/">https://sunflagsteel.com/1695-2/</a>. on half yearly basis.</p> <p>Also the Half yearly compliance report is uploaded in Sunflag Steel web site. Refer our compliance report submitted to your office vide letter No.Poll/MoEFCC/FC-2/3A/2724 dtd 24.03.2022</p>
iv	The project proponent shall monitor the criteria pollutants level namely; PM10, SO2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company	<p>Complied, on line monitoring of pollutants data level namely; PM10, SO2, NOx (ambient levels &amp; stack emissions) has been monitored for the projects and displayed the same at the Main Gate of the company.</p> <p>Refer our compliance report submitted to your office vide letter No.Poll/MoEFCC/FC-2/3A/2724 dtd 24.03.2022</p>
v	The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.	<p>Complied,</p> <p>The Six monthly status of compliance report of EC conditions has been uploaded on website of the ministry of Environment, Forest and Climate Change at environment clearance portal. Refer our compliance report submitted to your office vide letter No.Poll/MoEFCC/FC-2/3A/2724 dtd 24.03.2022</p>

vi	The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.	Refer our compliance report submitted to your office vide letter No.Poll/MoEFCC/FC-2/3A/2724 dtd 24.03.2022
vii	The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.	Complied.  Financial closure and final approval of project will be submitted after commissioning of Combustor.
viii	The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.	Agree to comply with this condition.
ix	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forest, and Climate Change (MoEF&CC)	Agree to comply with this condition.
x	Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986	Agree to comply with this condition.
xi	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory	Agree to comply with this condition.
xii	The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.	Agree to comply with this condition.
xiii	The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.	Agree to comply with this condition.
xiv	Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010	Ok, Noted.

### ANNEXURE-1. (A)

#### STACK EMISSION STATUS

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

Stack Identity	<b>S-2 Reheating Furnace (ASM) S-1A</b>
Stack attached to	Reheating Furnace of Alloy Steel Mill
Material of construction	Mild Steel
Stack height above ground level	30.0 mtr.
Stack shape at top	Circular
Stack diameter	1.1 mtr
Type of fuel	LSHS/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	11-04-2024	204	8.30	17260.46	16.9	76.6	178.6
2	17-04-2024	234	8.07	15789.76	19.3	68.7	176.3
3	22-04-2024	216	8.17	16573.62	13.7	69.9	167.2
4	02-05-2024	228	8.27	16372.89	15.6	71.7	178.4
5	14-05-2024	246	7.63	14583.29	23.7	67.8	184.5
6	01-07-2024	218	8.65	17476.11	18.7	73.8	172.2
7	09-07-2024	226	8.01	15903.32	20.3	69.3	179.3
8	15-07-2024	236	8.92	17381.95	16.2	71.9	171.9
9	22-07-2024	204	8.30	17261.62	20.3	75.8	177.7
10	16-08-2024	218	7.56	15273.71	30.5	67.3	179.9
11	23-08-2024	224	7.20	14370.39	25.5	64.9	185.1
12	29-08-2024	214	7.78	15847.50	24.6	70.3	182.1
13	13-09-2024	224	8.23	16425.49	27.2	72.5	172.2
14	16-09-2024	218	7.81	15778.37	25.2	66.5	184.2
15	23-09-2024	208	8.67	17880.44	18.1	72.9	179.3



Method	IS 11255 (Part 3): 2008 RA 2018	S 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	S 11255 (Part 1):1985 RA 2019	IS 11255 (Part 2):1985 RA 2019	IS 11255 (Part 7):2005 RA 2017
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Norms: **Total Particulate Matter (PM)-50 mg/Nm³.**  
**Sulphur Dioxide – 720 Kg/Day.**

### STACK EMISSION STATUS

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

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

#### Results of Analysis

Sr. No.	Date of Monitoring	Temp(°C)	Velocity of Flue Gas (m/sec)	Volume of Flue Gas (Nm³/hr)	Total Particulate Matter (PM) (mg/Nm³)	SO2 (kg/day)	NO2) (mg/ Nm3 )
1	02-04-2024	138	10.51	53664.13	32.6	470.2	346.3
2	09-04-2024	134	9.73	50172.42	27.8	422.3	338.5
3	20-04-2024	128	9.91	51863.78	36.8	452.3	345.8
4	24-04-2024	132	9.37	48555.35	31.8	436.4	352.1
5	04-05-2024	142	10.32	52186.80	32.3	455.6	344.1
6	17-05-2024	142	9.03	45666.53	43.6	420.9	356.7
7	22-05-2024	146	9.87	49432.73	33.8	448.2	352.6
8	28-05-2024	137	9.51	48679.19	35.5	435.6	353.4
9	05-06-2024	138	10.03	51215.32	36.9	458.2	358.1
10	11-06-2024	146	9.53	47734.39	32.4	435.4	364.4
11	20-06-2024	134	10.30	53110.17	33.7	470.9	348.5
12	25-06-2024	128	9.66	50556.78	38.5	444.6	348.4
13	03-07-2024	136	10.25	52592.5	32.3	460.9	351.2
14	12-07-2024	128	9.15	47887.63	35.7	432.8	364.5
15	17-07-2024	123	9.84	52146.25	37.8	460.8	349.5
16	23-07-2024	134	10.84	55890.06	30.2	476.5	356.1
17	06-08-2024	126	9.88	51967.37	39.6	460.1	357.7
18	21-08-2024	134	9.73	50169.71	38.2	442.4	357.7
19	30-08-2024	138	10.35	52845.74	36.9	458.5	354.4





20	04-09-2024	136	10.79	55358.73	41.6	473.9	349.1
21	14-09-2024	138	10.27	52437.98	36.3	457.8	342.9
22	20-09-2024	128	10.76	56307.68	35.1	478.6	346.9
23	26-09-2024	123	9.60	50874.39	32.4	435.5	351.1
	Method	IS 11255 (Part 3): 2008 RA 2018	S 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	S 11255 (Part 1):1985 RA 2019	IS 11255 (Part 2):1985 RA 2019	S 11255 (Part 7):2005 RA 2017

Norms: **Total Particulate Matter (PM)-50 mg/Nm³.**  
**Sulphur Dioxide – 4100 Kg/Day.**



### STACK EMISSION STATUS

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

Stack Identity	<b>S-4 (BSM)</b>
Stack attached to	Reheating Furnace of Bar & Section Mill
Material of construction	Mild Steel
Stack height above ground level	65.0 mtr.
Stack shape at top	Circular
Stack diameter	1.5 mtr
Type of fuel	LSHS/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	01-04-2024	318	11.52	35952.59	18.7	186.9	177.4
2	08-04-2024	304	11.98	38294.33	25.7	160.7	168.4
3	17-04-2024	324	11.27	34820.29	25.6	165.9	189.3
4	22-04-2024	310	12.24	38722.23	17.1	183.9	174.7
5	02-05-2024	318	11.63	36294.42	17.7	149.9	167.9
6	14-05-2024	324	10.83	33459.49	20.6	158.1	190.9
7	22-05-2024	328	12.13	37225.94	24.4	169.3	182.1
8	27-05-2024	322	11.14	34534.33	20.4	158.5	185.7
9	03-06-2024	312	11.15	35154.76	18.1	152.6	175.5
10	10-06-2024	324	12.09	37351.27	15.8	163.1	176.6
11	19-06-2024	305	11.60	37018.0	16.1	172.2	190.5
12	24-06-2024	316	11.50	36013.01	17.5	160.1	179.3
13	01-07-2024	314	11.59	36418.51	22.1	148.7	168.4
14	09-07-2024	328	12.42	38115.92	26.8	159.8	172.1
15	15-07-2024	308	12.02	38157.15	22.7	159.1	67.9
16	22-07-2024	302	11.26	36120.46	24.6	161.6	172.3
17	08-08-2024	264	8.93	30673.26	32.4	132.8	172.4
18	16-08-2024	288	12.10	35451.72	29.5	155.3	142.8
19	22-08-2024	312	11.46	36131.67	28.4	151.5	158.1



20	29-08-2024	305	11.89	37938.83	22.5	159.4	163.7
21	02-09-2024	318	12.13	37853.26	26.4	162.5	168.5
22	09-09-2024	305	11.19	35708.16	25.4	148.4	161.8
23	16-09-2024	312	10.72	33799.02	22.1	146.3	173.2
24	23-09-2024	322	11.66	36143.41	24.3	4149.4	164.5
Method		IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	S 11255 (Part 1):1985 RA 2019	IS 11255 (Part 2):1985 RA 2019	S 11255 (Part 7):2005 RA 2017

Norms: **Total Particulate Matter (PM)-50 mg/Nm³.**  
**Sulphur Dioxide – 2916 Kg/Day.**  
**Oxides of Nitrogen – 400 mg/Nm³**



### STACK EMISSION STATUS

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

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

### Results of Analysis

Sr. No.	Date of Monitoring	Temp (°C)	Velocity of Flue Gas (m/sec)	Volume of Flue Gas (Nm <sup>3</sup> /hr)	Total Particulate Matter (PM) (mg/Nm <sup>3</sup> )
1	04-04-2024	87	13.39	563466.05	15.9
2	08-04-2024	91	12.50	520289.79	20.8
3	17-04-2024	84	12.67	537728.04	19.9
4	23-04-2024	82	12.75	544024.74	23.2
5	03-05-2024	98	13.43	548340.94	23.5
6	15-05-2024	85	12.34	522181.91	17.8
7	24-05-2024	98	12.91	527202.25	13.7
8	27-05-2024	96	12.41	509510.0	14.5
9	03-06-2024	96	13.28	545184.84	16.1
10	10-06-2024	98	12.44	508002.11	14.5
11	20-06-2024	92	13.48	559482.76	9.26
12	25-06-2024	84	12.67	537662.60	17.6
13	02-07-2024	87	13.39	563443.19	14.1
14	10-07-2024	82	12.41	529639.17	16.4
15	16-07-2024	92	12.92	536283.67	17.2
16	24-07-2024	76	12.01	521401.01	19.2
17	07-08-2024	83	10.76	458035.11	30.6
18	17-08-2024	76	12.18	528838.58	23.6
19	23-08-2024	78	11.63	502053.94	19.2
20	31-08-2024	82	12.75	544113.05	13.1



21	04-09-2024	82	13.29	567134.82	15.4
22	13-09-2024	87	12.55	528160.78	21.7
23	19-09-2024	92	12.81	531689.03	16.9
24	24-09-2024	87	12.20	513458.97	17.8
Method		IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 1):1985 RA 2019

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



### STACK EMISSION STATUS

#### **Location:-S-11 (MBF Stoves)**

Stack Identity	S-11 (MBF Stoves)
Stack attached to	MBF Gas Fired Hot Blast Burner Stoves
Material of construction	Mild Steel
Stack height above ground level	45.0 mtr.
Stack shape at top	Circular
Stack diameter	2.0 mtr
Type of fuel	MBF Cleaned Gas & Coke

#### Results of Analysis

Sr. No.	Date of Monitoring	Temp (°C)	Velocity of Flue Gas (m/sec)	Volume of Flue Gas (Nm <sup>3</sup> /hr)	Total Particulate Matter (PM) (mg/Nm <sup>3</sup> )	SO <sub>2</sub> (kg/day)	NO <sub>x</sub> (mg/Nm <sup>3</sup> )	CO %
1	04-04-2024	153	12.54	96482.64	16.0	294.5	115.4	BDL(<0.1)
2	09-04-2024	147	12.79	99811.94	10.5	285.7	107.5	BDL(<0.1)
3	20-04-2024	142	13.03	102916.95	9.46	316.7	182.9	BDL(<0.1)
4	24-04-2024	154	13.98	107299.92	10.7	299.5	176.3	BDL(<0.1)
5	06-05-2024	148	12.8	99659.45	9.96	287.4	109.6	BDL(<0.1)
6	12-06-2024	154	13.54	103939.68	9.74	296.6	102.6	BDL(<0.1)
7	21-06-2024	147	12.59	98264.44	9.78	307.9	113.9	BDL(<0.1)
8	26-06-2024	142	13.03	102912.78	8.68	299.2	109.1	BDL(<0.1)
9	03-07-2024	148	12.87	100201.75	13.7	293.1	108.2	BDL(<0.1)
10	12-07-2024	143	13.05	102811.85	16.8	294.3	110.6	BDL(<0.1)
11	17-07-2024	144	12.00	94320.57	10.3	257.1	96.3	BDL(<0.1)
12	23-07-2024	142	13.78	108821.67	15.1	281.9	83.5	BDL(<0.1)
13	08-08-2024	152	10.77	83079.47	21.7	255.2	115.4	BDL(<0.1)
14	21-08-2024	147	12.59	98269.76	17.3	292.8	116.1	BDL(<0.1)
15	31-08-2024	142	13.35	105448.74	16.5	305.3	114.1	BDL(<0.1)
16	06-09-2024	152	13.32	102737.59	15.3	311.6	119.3	BDL(<0.1)



17	14-09-2024	147	12.45	97166.49	14.1	295.7	112.9	BDL(<0.1)
18	20-09-2024	143	11.98	94407.59	13.1	290.5	112.2	BDL(<0.1)
19	26-09-2024	142	12.78	100951.89	12.6	304.3	108.1	BDL(<0.1)
Method		IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 1):1985 RA 2019	IS 11255 (Part 2):1985 RA 2019	IS 11255 (Part 7):2005 RA 2017	

Results of Analysis

Norms: **Total Particulate Matter (PM)-30 mg/Nm³.**  
**Sulphur Dioxide – 1620 Kg/Day.**  
**Oxides of Nitrogen – 200 mg/Nm³**  
**Carbon Monoxide - 1.0 %**

### STACK EMISSION STATUS

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

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

#### Results of Analysis

Sr. No.	Date of Monitoring	Temp(° C)	Velocity of Flue Gas (m/sec)	Volume of Flue Gas (Nm³/hr)	Total Particulate Matter (PM) (mg/Nm³)	SO <sub>2</sub> (kg/day)	NO <sub>x</sub> (mg/Nm³)
1	05-04-2024	162	17.08	289495.97	37.4	189.3	102.5
2	15-04-2024	157	17.34	297251.92	45.1	199.1	102.3
3	25-04-2024	168	16.19	270710.46	47.7	197.9	110.8
4	09-05-2024	166	16.10	270428.38	32.5	232.2	112.1
5	08-06-2024	162	16.82	285089.12	41.3	209.1	102.8
6	14-06-2024	168	18.05	301750.0	39.4	199.8	98.8
7	28-06-2024	157	16.57	284152.07	43.1	227.8	103.4
8	08-07-2024	168	18.06	301798.74	37.3	175.9	92.6
9	26-07-2024	162	17.49	296344.98	28.3	231.8	102.1
10	07-08-2024	149	11.86	207274.25	40.7	161.2	98.6
11	19-08-2024	154	14.81	255761.82	24.3	242.4	109.4
12	27-08-2024	162	13.73	232768.95	22.4	236.1	113.6
13	11-09-2024	162	14.72	249535.85	42.4	181.9	95.3
14	21-09-2024	168	15.58	260479.04	44.2	152.6	86.3
15	27-09-2024	157	15.93	273173.28	39.4	138.6	80.5
Method	IS 11255 (Part 3): 2008 RA 2018	S 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	S 11255 (Part 1):1985 RA 2019	IS 11255 (Part 2):1985 RA 2019	IS 11255 (Part 7):2005 RA 2017	

Norms: Total Particulate Matter (PM)-50 mg/Nm³.  
 Sulphur Dioxide – 272 Kg/Day.  
 Oxides of Nitrogen – 500 mg/Nm³



### 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 (Nm³/hr)	Total Particulate Matter (PM) (mg/Nm³)	SO <sub>2</sub> (kg/day)	NO <sub>x</sub> (mg/Nm³)
1	05-04-2024	142	8.65	96830.28	40.7	84.2	98.3
2	15-04-2024	134	8.66	98849.06	43.1	87.2	101.3
3	25-04-2024	153	9.42	102732.52	40.5	68.0	105.0
4	10-05-2024	136	8.40	95415.03	37.1	88.2	102.5
5	08-06-2024	146	8.94	99122.57	38.2	79.5	94.6
6	14-06-2024	142	8.84	98957.19	31.4	87.1	104.3
7	28-06-2024	138	8.51	96187.62	39.2	69.7	89.5
8	08-07-2024	147	8.99	99439.62	30.6	71.8	88.4
9	26-07-2024	142	8.75	97949.71	24.5	91.4	109.6
10	07-08-2024	137	8.79	99597.44	32.4	61.6	81.6
11	19-08-2024	134	8.28	94515.40	26.8	87.9	114.8
12	27-08-2024	142	9.21	103106.03	28.5	89.3	112.4
13	11-09-2024	146	9.70	107553.46	37.7	54.2	80.1
14	21-09-2024	154	10.22	111193.12	27.5	56.7	70.7
15	27-09-2024	136	8.78	99728.72	28.4	63.4	76.5
<b>Method</b>	IS 11255 (Part 3): 2008 RA 2018	S 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	S 11255 (Part 1):1985 RA 2019	IS 11255 (Part 2):1985 RA 2019	IS 11255 (Part 7):2005 RA 2017	

Norms: **Total Particulate Matter (PM)-50 mg/Nm³.**  
**Sulphur Dioxide – 92 Kg/Day.**  
**Oxides of Nitrogen - 500 mg/Nm³**

### STACK EMISSION STATUS

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

Stack Identity	<b>S-25 (Sinter Plant)</b>
Stack attached to	Tail ESP-2 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	15-04-2024	116	7.28	86184.96	34.2	146.6	117.8
2	25-04-2024	122	6.78	79044.30	37.9	150.1	124.0
3	09-05-2024	116	7.06	83574.82	37.6	143.1	126.1
4	08-06-2024	118	7.30	85976.19	36.8	131.6	112.3
5	14-06-2024	126	7.59	87598.19	29.5	126.2	109.7
6	28-06-2024	124	7.78	90245.81	31.6	115.9	101.4
7	08-07-2024	126	6.81	78596.00	28.3	129.8	127.3
8	26-07-2024	118	6.38	75140.83	23.3	116.9	115.2
9	07-08-2024	112	7.03	84087.72	24.7	122.7	120.4
10	19-08-2024	118	6.62	77966.39	25.6	105.7	107.8
11	27-08-2024	118	7.23	76536.64	30.3	114.3	110.6
12	11-09-2024	116	7.39	87484.84	32.7	124.8	119.1
13	21-09-2024	119	7.09	83287.63	28.5	131.5	126.4
14	27-09-2024	112	7.14	85402.30	30.2	121.8	121.3
<b>Method</b>	IS 11255 (Part 3): 2008 RA 2018	S 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	S 11255 (Part 1):1985 RA 2019	IS 11255 (Part 2):1985 RA 2019	IS 11255 (Part 7):2005 RA 2017	

Norms: **Total Particulate Matter (PM)-50 mg/Nm<sup>3</sup>.**  
**Sulphur Dioxide – 184 Kg/Day.**  
**Oxides of Nitrogen - 500 mg/Nm<sup>3</sup>**



**STACK EMISSION STATUS**

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

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

Results of Analysis

Sr. No.	Date of Monitoring	Temp (°C)	Velocity of Flue Gas (m/sec)	Volume of Flue Gas (Nm <sup>3</sup> /hr)	Total Particulate Matter (PM) (mg/Nm <sup>3</sup> )
1	06-04-2024	42	4.49	14140.84	12.8
2	18-04-2024	37	4.02	12865.34	9.59
3	10-05-2024	46	4.80	14927.60	5.84
4	18-06-2024	51	4.56	13962.37	6.26
5	29-06-2024	46	4.93	15331.89	5.49
6	27-07-2024	38	3.70	11802.84	10.7
7	09-08-2024	37	4.46	14272.91	9.08
8	20-08-2024	40	4.19	13280.70	8.38
9	28-08-2024	36	4.16	13356.29	10.4
10	12-09-2024	38	4.87	15534.89	8.56
11	28-09-2024	41	4.62	14597.19	7.25
Method		IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 1):1985 RA 2019

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



**STACK EMISSION STATUS**

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

Stack Identity	S-28 Flux Screening Quickling Bunker Top De-Dusting System (Sinter Plant)
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 (Nm³/hr)	Total Particulate Matter (PM) (mg/Nm³)
1	06-04-2024	48	5.89	18207.22	16.8
2	18-04-2024	43	5.51	17301.60	15.6
3	10-05-2024	52	6.46	19723.96	14.6
4	18-06-2024	57	6.40	19244.18	8.78
5	29-06-2024	54	6.67	20240.59	7.13
6	27-07-2024	46	5.87	18258.91	12.5
7	09-08-2024	48	6.01	18546.76	18.7
8	20-08-2024	52	5.59	17066.49	15.8
9	28-08-2024	46	5.65	17574.12	16.3
10	12-09-2024	48	6.31	19506.05	13.6
11	28-09-2024	46	5.98	18601.33	19.2
Method		IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 1):1985 RA 2019

Norms: **Total Particulate Matter (PM) - 50 mg/Nm³.**



### STACK EMISSION STATUS

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

#### Results of Analysis

Sr. No.	Date of Monitoring	Temp (°C)	Velocity of Flue Gas (m/sec)	Volume of Flue Gas (Nm <sup>3</sup> /hr)	Total Particulate Matter (PM) (mg/Nm <sup>3</sup> )	SO <sub>2</sub> (kg/day)	NO <sub>x</sub> (mg/Nm <sup>3</sup> )	(CO) %
1	03-04-2024	145	8.97	137927.45	45.7	1008.5	256.6	BDL(<0.1)
2	10-04-2024	137	9.16	143589.50	40.7	1019.5	248.7	BDL(<0.1)
3	07-05-2024	154	9.35	140730.73	43.3	1047.4	243.8	BDL(<0.1)
4	16-05-2024	148	10.28	156172.52	42.5	1154.9	236.2	BDL(<0.1)
5	23-05-2024	147	8.99	137574.86	39.2	1052.5	254.5	BDL(<0.1)
6	29-05-2024	152	8.85	133839.10	41.7	1015.2	256.7	BDL(<0.1)
7	04-06-2024	152	8.85	133840.91	35.3	1014.6	248.8	BDL(<0.1)
8	13-06-2024	147	9.18	140480.55	40.8	1033.4	237.4	BDL(<0.1)
9	21-06-2024	143	9.67	149409.92	38.9	1085.8	230.9	BDL(<0.1)
10	27-06-2024	142	8.94	138458.01	35.5	1043.3	248.1	BDL(<0.1)
11	04-07-2024	142	9.03	139848.11	39.2	1036.6	240.1	BDL(<0.1)
12	11-07-2024	146	9.35	143417.7	37.4	1017.1	232.5	BDL(<0.1)
13	19-07-2024	137	8.70	136384.20	38.3	1029.5	246.2	BDL(<0.1)
14	25-07-2024	134	9.30	146862.65	40.6	1076.8	233.6	BDL(<0.1)
15	07-08-2024	136	7.89	123988.77	33.5	897.9	232.5	BDL(<0.1)
16	05-09-2024	142	9.30	144029.61	39.6	1013.1	228.9	BDL(<0.1)
17	18-09-2024	147	8.80	134667.27	37.4	1005.3	225.9	BDL(<0.1)
18	25-09-2024	143	8.37	129316.80	35.6	980.9	230.5	BDL(<0.1)
Method		IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 1):1985 RA 2019	IS 11255 (Part 2):1985 RA 2019	IS 11255 (Part 7):2005 RA 2017	Multi Gas Analyzer Method

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



**STACK EMISSION STATUS**

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

Results of Analysis

Sr. No.	Date of Monitoring	Temp (°C)	Velocity of Flue Gas (m/sec)	Volume of Flue Gas (Nm³/hr)	Total Particulate Matter (PM) (mg/Nm³)
1	03-04-2024	55	16.92	52205.30	38.4
2	10-04-2024	47	16.17	51126.79	43.5
3	07-05-2024	58	16.92	51711.90	30.3
4	16-05-2024	54	17.13	53007.72	40.2
5	23-05-2024	62	17.72	53529.03	37.8
6	29-05-2024	52	16.50	50587.23	31.4
7	04-06-2024	64	16.72	50195.59	38.1
8	13-06-2024	65	17.80	53296.32	45.2
9	21-06-2024	62	16.94	51171.41	39.5
10	27-06-2024	61	16.88	51139.38	41.6
11	04-07-2024	54	17.20	53224.33	40.2
12	11-07-2024	56	16.87	51892.81	38.7
13	19-07-2024	52	16.06	49992.37	23.3
14	25-07-2024	48	15.51	48885.23	32.3
15	13-08-2024	43	16.95	54265.55	38.6
16	05-09-2024	52	17.07	53152.12	37.1
17	18-09-2024	56	16.56	50925.50	40.5
18	25-09-2024	54	17.50	54163.62	38.5
Method		IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 1):1985 RA 2019

Norms: Total Particulate Matter (PM)- 50 mg/Nm³.

### STACK EMISSION STATUS

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

Stack Identity	S-35 Reheating Furnace (Blooming Mill)
Stack attached to	Reheating Furnace Blooming Mill
Material of construction	Mild Steel
Stack height above ground level	70.0 mtr.
Stack shape at top	Circular
Stack diameter	2.0 mtr
Type of fuel	LSHS / 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	01-04-2024	324	9.28	50975.78	21.4	274.6	191.4
2	20-04-2024	314	10.52	58769.26	23.2	292.2	174.4
3	23-04-2024	328	9.57	52221.01	19.9	266.7	187.1
4	03-05-2024	341	9.42	50312.13	13.4	271.9	194.5
5	15-05-2024	338	8.43	45246.84	17.1	254.7	201.7
6	20-05-2024	341	9.15	48873.37	20.3	266.1	198.5
7	28-05-2024	345	9.83	52159.30	22.7	296.4	203.8
8	11-06-2024	342	9.68	51617.42	18.9	270.4	188.4
9	19-06-2024	324	9.91	54433.47	21.5	296.3	194.4
10	24-06-2024	336	9.38	50509.81	23.6	272.9	193.6
11	02-07-2024	332	9.60	52037.66	23.4	264.1	179.1
12	10-07-2024	326	9.04	49491.64	25.1	270.2	182.9
13	16-07-2024	328	8.78	47910.83	27.8	241.3	174.4
14	24-07-2024	318	9.24	51274.81	25.6	238.9	167.2
15	08-08-2024	283	7.90	46598.49	36.4	245.3	186.6
16	17-08-2024	328	9.57	52220.30	31.5	259.8	171.9
17	23-08-2024	307	8.89	50264.80	33.6	245.7	168.1
18	30-08-2024	324	9.41	51689.88	28.4	245.7	163.5



19	02-09-2024	321	9.88	54543.51	25.8	254.5	164.6
20	09-09-2024	312	8.66	48545.86	30.4	252.1	187.3
21	19-09-2024	318	9.49	52660.69	27.2	259.6	175.1
22	24-09-2024	328	8.50	46381.67	22.3	235.9	181.7
Method		IS 11255 (Part 3): 2008 RA 2018	S 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 1):1985 RA 2019	IS 11255 (Part 2):1985 RA 2019	IS 11255 (Part 7):2005 RA 2017

Norms: **Total Particulate Matter (PM)-50 mg/Nm³.**  
**Sulphur Dioxide – 5490 Kg/Day.**  
**Oxides of Nitrogen – 400 mg/Nm³**





**STACK EMISSION STATUS**

**Location:- S-40 MBF stock house de dusting system**

Stack Identity	S-40 MBF stock house de dusting system
Stack diameter	1.0 meter

Results of Analysis

Sr. No.	Date of Monitoring	Temp(°C)	Velocity of Flue Gas (m/sec)	Flow Rate of Flue Gas (Nm³/hr)	Total Particulate Matter (PM) (mg/Nm³)
1	11-04-2024	46	17.58	45271.64	13.8
2	18-04-2024	51	17.20	43600.13	14.3
3	08-05-2024	54	17.80	44716.76	12.6
4	12-06-2024	64	17.50	42651.66	12.8
5	26-06-2024	58	16.57	41109.32	11.6
6	05-07-2024	58	16.96	42076.89	8.10
7	13-08-2024	46	18.36	47280.92	16.7
8	24-08-2024	43	18.76	48773.60	11.7
9	07-09-2024	47	18.73	48103.13	13.3
10	28-09-2024	51	17.72	44943.73	11.3
Method		IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 1):1985 RA 2019

Norms: **Total Particulate Matter (PM)-30 mg/Nm³.**

## 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	Apr-24	01-04-2024 to 02-04-2024	84.6	34.4	9.56	14.8
2		05-04-2024 to 06-04-2024	80.5	34.6	9.96	15.8
3		08-04-2024 to 09-04-2024	86.4	36.9	10.8	17.2
4		12-04-2024 to 13-04-2024	74.2	33.5	9.23	14.7
5		15-04-2024 to 16-04-2024	80.4	33.1	9.34	14.9
6		19-04-2024 to 20-04-2024	82.6	35.5	8.59	13.4
7		22-04-2024 to 23-04-2024	86.8	37.9	9.53	16.6
8		26-04-2024 to 27-04-2024	83.4	34.5	8.30	14.7
9	May-24	03-05-2024 to 04-05-2024	80.8	33.2	10.1	18.5
10		06-05-2024 to 07-05-2024	82.4	34.3	8.70	17.4
11		10-05-2024 to 11-05-2024	84.7	36.1	11.3	18.3
12		13-05-2024 to 14-05-2024	80.4	32.1	8.10	14.5
13		17-05-2024 to 18-05-2024	83.5	34.9	10.5	16.3
14		20-05-2024 to 21-05-2024	78.4	30.5	7.99	12.9
15		24-05-2024 to 25-05-2024	81.4	33.6	8.33	14.1
16		27-05-2024 to 28-05-2024	81.4	31.7	9.87	16.8
17	Jun-24	30-05-2024 to 31-05-2024	85.4	34.3	8.61	14.5
18		03-06-2024 to 04-06-2024	70.5	32.3	8.47	14.7
19		07-06-2024 to 08-06-2024	78.4	35.4	8.41	16.9
20		10-06-2024 to 11-06-2024	75.2	33.1	9.90	15.9
21		14-06-2024 to 15-06-2024	77.4	36.2	7.83	14.3
22		17-06-2024 to 18-06-2024	69.8	31.7	8.59	16.5
23		21-06-2024 to 22-06-2024	67.2	28.6	8.53	14.7

24		24-06-2024 to 25-06-2024	66.9	27.1	8.06	15.6
25		28-06-2024 to 29-06-2024	64.2	25.3	8.30	13.7
26	July-24	01-07-2024 to 02-07-2024	60.2	26.9	7.74	13.5
27		05-07-2024 to 06-07-2024	57.4	25.8	7.16	11.7
28		08-07-2024 to 09-07-2024	62.4	28.3	7.33	13.4
29		12-07-2024 to 13-07-2024	59.4	26.1	7.98	12.1
30		15-07-2024 to 16-07-2024	63.7	29.1	8.28	14.8
31		19-07-2024 to 20-07-2024	58.3	25.6	7.69	12.5
32		22-07-2024 to 23-07-2024	57.2	24.2	8.25	13.9
33		26-07-2024 to 27-07-2024	55.2	21.7	6.85	11.5
34		29-07-2024 to 30-07-2024	56.1	22.4	8.59	14.5
35	Aug-24	05-08-2024 to 06-08-2024	58.6	26.1	8.38	12.5
36		09-08-2024 to 10-08-2024	60.6	26.2	7.96	14.6
37		12-08-2024 to 13-08-2024	62.8	27.9	8.45	15.8
38		16-08-2024 to 17-08-2024	59.6	24.5	9.58	16.2
39		19-08-2024 to 20-08-2024	57.4	25.2	7.61	12.4
40		23-08-2024 to 24-08-2024	63.5	29.9	8.74	14.5
41		26-08-2024 to 27-08-2024	61.8	28.2	7.96	14.2
42		30-08-2024 to 31-08-2024	56.4	22.5	7.83	11.7
43	Sep-24	02-09-2024 to 03-09-2024	62.4	28.6	9.10	14.3
44		06-09-2024 to 07-09-2024	60.5	26.7	8.54	12.9
45		09-09-2024 to 10-09-2024	64.3	30.4	7.06	10.9
46		13-09-2024 to 14-09-2024	61.4	27.7	8.07	13.4
47		16-09-2024 to 17-09-2024	63.2	28.6	7.71	11.4
48		20-09-2024 to 21-09-2024	65.2	31.4	8.97	14.4
49		23-09-2024 to 24-09-2024	63.2	29.4	8.43	14.7
50		27-09-2024 to 28-09-2024	59.4	27.8	7.17	13.2



NAAQM Standard	100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80(24 hrs)
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- 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	Apr-24	01-04-2024 to 02-04-2024	87.4	37.1	10.5	17.1
2		05-04-2024 to 06-04-2024	89.6	39.2	9.94	15.6
3		08-04-2024 to 09-04-2024	84.8	36.6	8.48	14.9
4		12-04-2024 to 13-04-2024	81.6	32.3	10.1	16.2
5		15-04-2024 to 16-04-2024	83.8	35.4	8.24	13.4
6		19-04-2024 to 20-04-2024	79.2	31.6	7.84	16.7
7		22-04-2024 to 23-04-2024	69.4	31.9	8.71	14.5
8		26-04-2024 to 27-04-2024	67.6	31.2	7.92	13.4
9	May-24	03-05-2024 to 04-05-2024	84.6	34.9	9.28	20.6
10		06-05-2024 to 07-05-2024	87.8	38.2	10.6	16.8
11		10-05-2024 to 11-05-2024	83.2	33.5	10.6	15.6
12		13-05-2024 to 14-05-2024	85.2	35.4	9.12	15.6
13		17-05-2024 to 18-05-2024	88.4	37.3	9.89	17.5
14		20-05-2024 to 21-05-2024	85.8	36.2	8.77	14.3
15		24-05-2024 to 25-05-2024	87.8	38.2	7.18	13.3
16		27-05-2024 to 28-05-2024	78.9	33.4	9.03	14.2
17		30-05-2024 to 31-05-2024	74.2	31.1	9.93	15.3
18	Jun-24	03-06-2024 to 04-06-2024	76.3	31.6	8.31	16.8
19		07-06-2024 to 08-06-2024	78.1	33.9	10.1	17.5
20		10-06-2024 to 11-06-2024	74.2	29.4	9.06	14.4
21		14-06-2024 to 15-06-2024	79.8	34.5	7.13	12.4
22		17-06-2024 to 18-06-2024	67.2	29.4	8.88	14.3
23		21-06-2024 to 22-06-2024	65.7	26.3	8.19	12.9
24		24-06-2024 to 25-06-2024	64.7	24.1	7.20	13.5

25		28-06-2024 to 29-06-2024	62.9	22.4	7.44	11.5
26	July-24	01-07-2024 to 02-07-2024	62.4	29.6	7.20	15.3
27		05-07-2024 to 06-07-2024	59.3	28.6	7.98	13.7
28		08-07-2024 to 09-07-2024	60.7	27.3	8.33	14.4
29		12-07-2024 to 13-07-2024	58.7	25.2	6.78	11.8
30		15-07-2024 to 16-07-2024	56.2	26.4	7.96	13.2
31		19-07-2024 to 20-07-2024	54.2	23.4	7.81	12.8
32		22-07-2024 to 23-07-2024	59.2	25.5	8.54	14.1
33		26-07-2024 to 27-07-2024	61.2	29.1	9.48	15.9
34		29-07-2024 to 30-07-2024	55.1	23.4	7.59	12.8
35	Aug-24	05-08-2024 to 06-08-2024	56.2	22.8	7.32	11.9
36		09-08-2024 to 10-08-2024	62.4	25.1	8.91	13.7
37		12-08-2024 to 13-08-2024	60.2	23.6	8.40	14.4
38		16-08-2024 to 17-08-2024	63.9	25.1	9.96	15.7
39		19-08-2024 to 20-08-2024	59.2	26.6	8.34	12.9
40		23-08-2024 to 24-08-2024	61.7	28.1	8.40	13.5
41		26-08-2024 to 27-08-2024	64.2	30.3	8.69	15.4
42		30-08-2024 to 31-08-2024	58.2	25.9	7.89	12.6
43	Sep-24	02-09-2024 to 03-09-2024	64.9	31.2	9.31	15.7
44		06-09-2024 to 07-09-2024	61.7	27.4	7.50	13.3
45		09-09-2024 to 10-09-2024	66.3	32.1	7.20	11.6
46		13-09-2024 to 14-09-2024	64.6	30.4	8.88	12.3
47		16-09-2024 to 17-09-2024	62.4	29.1	7.01	12.3
48		20-09-2024 to 21-09-2024	61.2	28.5	8.62	14.1
49		23-09-2024 to 24-09-2024	62.8	28.3	8.54	13.4
50		27-09-2024 to 28-09-2024	60.7	29.9	7.42	11.9
NAAQM Standard			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80(24 hrs)

• 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	Apr-24	01-04-2024 to 02-04-2024	57.8	27.5	8.25	12.7
2		05-04-2024 to 06-04-2024	59.4	29.2	8.13	13.6
3		08-04-2024 to 09-04-2024	54.6	25.6	9.29	14.3
4		12-04-2024 to 13-04-2024	60.4	28.5	8.30	13.8
5		15-04-2024 to 16-04-2024	62.4	29.6	9.06	15.6
6		19-04-2024 to 20-04-2024	57.8	28.1	9.23	15.1
7		22-04-2024 to 23-04-2024	55.6	27.9	10.9	15.5
8		26-04-2024 to 27-04-2024	56.2	26.2	8.94	14.2
9	May-24	03-05-2024 to 04-05-2024	57.8	26.8	7.27	15.5
10		06-05-2024 to 07-05-2024	55.6	27.5	7.10	13.6
11		10-05-2024 to 11-05-2024	58.5	29.5	7.94	14.4
12		13-05-2024 to 14-05-2024	56.4	27.2	7.45	13.7
13		17-05-2024 to 18-05-2024	57.6	28.2	8.41	14.7
14		20-05-2024 to 21-05-2024	56.4	28.1	8.30	14.2
15		24-05-2024 to 25-05-2024	59.5	31.3	9.22	15.5
16		27-05-2024 to 28-05-2024	55.8	27.9	7.37	12.7
17		30-05-2024 to 31-05-2024	58.4	29.8	8.44	12.7
18	Jun-24	03-06-2024 to 04-06-2024	60.2	27.7	7.09	11.6
19		07-06-2024 to 08-06-2024	63.1	29.2	9.25	13.5
20		10-06-2024 to 11-06-2024	61.7	29.1	8.09	13.8
21		14-06-2024 to 15-06-2024	64.2	30.8	8.79	14.7
22		17-06-2024 to 18-06-2024	54.3	24.8	7.15	12.1
23		21-06-2024 to 22-06-2024	56.2	26.4	7.35	11.6
24		24-06-2024 to 25-06-2024	58.4	26.9	8.39	14.6



25		28-06-2024 to 29-06-2024	59.2	25.4	8.43	15.7
26	July-24	01-07-2024 to 02-07-2024	56.7	24.4	8.04	12.6
27		05-07-2024 to 06-07-2024	54.8	22.8	8.47	14.7
28		08-07-2024 to 09-07-2024	57.8	25.1	8.97	13.7
29		12-07-2024 to 13-07-2024	55.6	23.4	6.92	12.8
30		15-07-2024 to 16-07-2024	56.2	24.7	8.28	13.7
31		19-07-2024 to 20-07-2024	53.2	20.1	6.80	11.2
32		22-07-2024 to 23-07-2024	54.2	26.3	8.71	13.8
33		26-07-2024 to 27-07-2024	52.2	23.8	8.39	12.1
34		29-07-2024 to 30-07-2024	50.8	21.3	7.39	13.5
35	Aug-24	05-08-2024 to 06-08-2024	54.8	21.5	7.90	11.2
36		09-08-2024 to 10-08-2024	52.9	19.7	6.85	10.7
37		12-08-2024 to 13-08-2024	53.7	20.9	6.93	11.4
38		16-08-2024 to 17-08-2024	55.6	21.3	7.10	13.6
39		19-08-2024 to 20-08-2024	51.8	22.3	7.90	12.5
40		23-08-2024 to 24-08-2024	49.4	19.5	7.81	10.5
41		26-08-2024 to 27-08-2024	50.4	21.3	6.72	11.7
42		30-08-2024 to 31-08-2024	48.7	19.3	6.87	10.9
43	Sep-24	02-09-2024 to 03-09-2024	50.9	21.6	7.16	12.5
44		06-09-2024 to 07-09-2024	48.7	18.1	7.25	10.3
45		09-09-2024 to 10-09-2024	47.6	17.9	7.45	11.4
46		13-09-2024 to 14-09-2024	49.7	19.5	8.84	13.2
47		16-09-2024 to 17-09-2024	54.8	23.7	7.81	11.4
48		20-09-2024 to 21-09-2024	52.4	21.2	8.89	13.1
49		23-09-2024 to 24-09-2024	55.4	23.1	7.10	11.6
50		27-09-2024 to 28-09-2024	57.6	25.8	8.62	13.8
NAAQM Standard			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80(24 hrs)

• All Concentrations are in micro gram per cubic meter.

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

Sr. No.	Month	Date of Monitoring	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>
			µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>
1	Apr-24	01-04-2024 to 02-04-2024	53.8	25.3	9.21	13.8
2		05-04-2024 to 06-04-2024	55.2	26.1	10.4	15.2
3		08-04-2024 to 09-04-2024	60.1	29.3	10.2	15.4
4		12-04-2024 to 13-04-2024	62.4	30.9	9.92	13.0
5		15-04-2024 to 16-04-2024	63.2	30.7	9.86	17.1
6		19-04-2024 to 20-04-2024	66.1	31.6	7.99	12.6
7		22-04-2024 to 23-04-2024	58.6	29.1	7.79	14.2
8		26-04-2024 to 27-04-2024	63.5	29.6	8.59	15.7
9	May-24	03-05-2024 to 04-05-2024	55.8	27.6	8.44	14.6
10		06-05-2024 to 07-05-2024	50.9	25.8	8.52	12.9
11		10-05-2024 to 11-05-2024	53.2	28.7	8.88	14.4
12		13-05-2024 to 14-05-2024	51.6	24.4	7.99	12.9
13		17-05-2024 to 18-05-2024	55.6	26.8	8.09	13.9
14		20-05-2024 to 21-05-2024	51.6	24.7	8.47	12.8
15		24-05-2024 to 25-05-2024	54.3	26.3	8.62	13.0
16		27-05-2024 to 28-05-2024	52.6	25.1	8.73	13.4
17		30-05-2024 to 31-05-2024	54.6	27.3	7.57	13.3
18	Jun-24	03-06-2024 to 04-06-2024	57.2	26.2	7.30	12.6
19		07-06-2024 to 08-06-2024	59.1	28.9	8.09	14.2
20		10-06-2024 to 11-06-2024	55.4	25.3	7.94	12.5
21		14-06-2024 to 15-06-2024	58.3	27.7	8.44	13.1
22		17-06-2024 to 18-06-2024	51.2	23.3	7.94	13.6
23		21-06-2024 to 22-06-2024	53.9	25.1	6.82	11.9
24		24-06-2024 to 25-06-2024	56.8	23.3	7.39	13.5

25		28-06-2024 to 29-06-2024	54.8	21.1	7.30	10.8
26	July-24	01-07-2024 to 02-07-2024	53.4	21.5	6.97	10.1
27		05-07-2024 to 06-07-2024	51.8	19.3	7.01	12.2
28		08-07-2024 to 09-07-2024	54.6	22.1	8.46	14.5
29		12-07-2024 to 13-07-2024	50.6	18.1	6.64	12.4
30		15-07-2024 to 16-07-2024	52.6	21.8	7.42	12.3
31		19-07-2024 to 20-07-2024	49.6	17.9	7.21	11.6
32		22-07-2024 to 23-07-2024	47.8	17.7	6.73	11.1
33		26-07-2024 to 27-07-2024	45.2	15.7	6.67	10.2
34		29-07-2024 to 30-07-2024	47.6	17.9	7.23	11.9
35		Aug-24	05-08-2024 to 06-08-2024	48.7	17.3	6.22
36	09-08-2024 to 10-08-2024		50.6	17.9	7.03	11.6
37	12-08-2024 to 13-08-2024		49.7	17.5	6.62	10.7
38	16-08-2024 to 17-08-2024		51.6	20.9	7.15	11.5
39	19-08-2024 to 20-08-2024		54.7	24.8	7.76	13.7
40	23-08-2024 to 24-08-2024		53.9	23.4	7.96	11.7
41	26-08-2024 to 27-08-2024		55.2	27.9	8.31	14.7
42	30-08-2024 to 31-08-2024		52.4	21.6	7.16	12.1
43	Sep-24	02-09-2024 to 03-09-2024	54.2	22.6	8.62	11.4
44		06-09-2024 to 07-09-2024	56.6	23.9	8.10	14.1
45		09-09-2024 to 10-09-2024	57.4	25.6	8.92	13.2
46		13-09-2024 to 14-09-2024	55.5	23.1	7.38	12.3
47		16-09-2024 to 17-09-2024	51.4	20.7	7.27	12.2
48		20-09-2024 to 21-09-2024	53.9	23.5	8.79	13.7
49		23-09-2024 to 24-09-2024	48.2	18.7	6.65	10.8
50		27-09-2024 to 28-09-2024	50.7	20.9	7.73	11.4
NAAQM Standard			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80(24 hrs)

• All Concentrations are in microgram per cubic meter

### ANNEXURE-1. (C)

#### Ambient Noise Quality Status

April-2024	Hourly Average Noise Level dB (A)							
Location	1 <sup>st</sup>		2 <sup>nd</sup>		3 <sup>rd</sup>		4 <sup>th</sup>	
	06-04-2024		13-04-2024		20-04-2024		27-04-2024	
	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time
N-1 (Eklari Gate)	63.9	58.9	65.3	57.3	64.2	59.2	63.4	56.5
N-2 (Pump House-2) Near Water Reservoir	70.6	63.4	71.3	60.7	72.7	63.8	70.8	60.3
N-3 (STP)	53.0	45.8	52.4	46.7	51.2	44.7	52.6	46.5
N-4 (Guest House)	63.7	52.6	61.7	53.1	60.7	52.2	62.0	57.2
Norms	75	70	75	70	75	70	75	70

May-2024	Hourly Average Noise Level dB (A)									
Location	1 <sup>st</sup>		2 <sup>nd</sup>		3 <sup>rd</sup>		4 <sup>th</sup>		5 <sup>th</sup>	
	04-05-2024		11-05-2024		18-05-2024		25-05-2024		31-05-2024	
	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time
N-1 (Eklari Gate)	65.2	60.1	68.6	59.2	62.7	54.1	63.8	58.9	61.7	58.9
N-2 (Pump House-2) Near Water Reservoir	71.5	61.7	70.1	62.7	63.1	59.2	70.8	60.5	62.7	59.1
N-3 (STP)	53.2	46.3	53.0	47.3	52.9	45.8	50.6	44.7	51.7	46.3
N-4 (Guest House)	62.9	54.7	61.7	53.1	60.7	53.2	63.4	52.6	60.5	52.2
Norms	75	70	75	70	75	70	75	70	75	70

Jun-2024	Hourly Average Noise Level dB (A)							
Location	1 <sup>st</sup>		2 <sup>nd</sup>		3 <sup>rd</sup>		4 <sup>th</sup>	
	08-06-2024		15-06-2024		22-06-2024		29-06-2024	
	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time
N-1 (Eklari Gate)	65.3	57.3	63.9	58.9	64.2	54.1	68.6	57.7
N-2 (Pump House-2) Near Water Reservoir	71.8	62.7	70.2	59.2	71.2	61.7	70.6	62.1
N-3 (STP)	52.5	48.7	51.2	46.8	50.6	46.3	53.1	45.8
N-4 (Guest House)	62.9	53.2	61.7	54.7	60.4	58.1	63.6	52.9
Norms	75	70	75	70	75	70	75	70

Jul-2024	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>	
	06-07-2024		13-07-2024		20-07-2024		27-07-2024		31-07-2024	
	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time
N-1 (Eklari Gate)	63.5	59.2	60.7	54.1	62.1	58.9	64.2	56.5	61.7	54.1
N-2 (Pump House-2) Near Water Reservoir	72.1	63.4	70.1	61.7	71.5	60.3	72.7	62.7	70.5	60.5
N-3 (STP)	51.7	44.7	52.5	46.8	53.2	46.3	53.4	45.8	53.9	49.1
N-4 (Guest House)	63.9	59.1	61.1	57.2	60.7	54.7	63.4	54.1	64.1	53.6
Norms	75	70	75	70	75	70	75	70	75	70



Aug-2024	Hourly Average Noise Level dB (A)							
Location	1 <sup>st</sup>		2 <sup>nd</sup>		3 <sup>rd</sup>		4 <sup>th</sup>	
	10-08-2024		17-08-2024		24-08-2024		31-08-2024	
	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time
N-1 (Eklari Gate)	65.2	59.1	63.1	58.9	64.2	59.1	63.9	56.4
N-2 (Pump House-2) Near Water Reservoir	70.6	63.1	71.4	63.4	71.3	62.1	70.1	60.4
N-3 (STP)	52.6	44.8	53.7	45.8	51.7	46.3	50.6	44.7
N-4 (Guest House)	65.9	58.5	62.9	53.1	63.5	54.1	61.7	52.9
Norms	75	70	75	70	75	70	75	70

Sep-2024	Hourly Average Noise Level dB (A)							
Location	1 <sup>st</sup>		2 <sup>nd</sup>		3 <sup>rd</sup>		4 <sup>th</sup>	
	07-09-2024		14-09-2024		21-09-2024		28-09-2024	
	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time
N-1 (Eklari Gate)	69.1	57.3	63.8	58.9	65.3	59.2	63.4	53.7
N-2 (Pump House-2) Near Water Reservoir	72.1	62.7	70.8	60.5	71.8	61.7	72.4	63.4
N-3 (STP)	51.2	46.5	52.9	45.8	51.9	44.7	53.9	46.2
N-4 (Guest House)	65.1	54.7	63.4	52.6	61.7	53.1	64.1	53.3
Norms	75	70	75	70	75	70	75	70

**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)	Apr-24	1502.5	778.4
		May-24	1524.4	782.7
		Jun-24	1459.1	682.5
		Jul-24	1323.9	529.1
		Aug-24	1456.2	540.6
		Sep-24	1384.3	492.5
2	Raw Material Handling Area (Near Transfer Point)	Apr-24	1424.8	686.9
		May-24	1462.3	702.7
		Jun-24	1352.9	679.3
		Jul-24	1293.1	489.3
		Aug-24	1305.6	493.5
		Sep-24	1294.8	451.8
3	SMS (Steel Melting Shop) ( Near Ladle Heating Furnace)	Apr-24	1632.5	692.2
		May-24	1546.3	652.7
		Jun-24	1377.5	584.8
		Jul-24	1301.4	506.5
		Aug-24	1462.9	592.5
		Sep-24	1489.3	602.6
4	MBF (Near Mini Blast Furnace)	Apr-24	1492.8	581.5
		May-24	--	--
		Jun-24	1392.6	520.6
		Jul-24	1252.4	476.3
		Aug-24	1364.9	524.7



		Sep-24	1204.7	402.7
5	Raw Material Feed Area (Near Mixing Area )	Apr-24	1372.8	582.5
		May-24	1412.7	602.6
		Jun-24	1372.8	589.5
		Jul-24	1351.4	546.4
		Aug-24	1261.2	432.3
		Sep-24	1214.5	424.5
6	DRP-2 (Near Coal Circuit Area)	Apr-24	1441.1	628.6
		May-24	1501.4	674.9
		Jun-24	1472.5	624.4
		Jul-24	1408.3	596.2
		Aug-24	--	--
		Sep-24	584.8	232.8
Norms			2000	--





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

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

Sr. No.	Test Parameter	Measurement Unit	Test Results						Limit as per Consent Conditions
			Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	
1.	pH value	--	--	--	--	--	--	--	--
2.	Total Suspended Solids	mg/l	25.2	12.8	5.80	10.4	8.40	11.2	50
3.	Biochemical oxygen demand(BOD at 27°C for 3 days)	mg/l	25.9	21.0	20.0	22.0	20.0	22.7	30
4.	Chemical Oxygen Demand (COD)	mg/l	80.0	68.0	64.0	76.6	68.0	79.9	100
5.	Oil & Grease	mg/l	--	--	--	--	--	--	--
6.	Total Dissolved Solids	mg/l	--	--	--	--	--	--	--
7.	Chloride (as Cl)	mg/l	--	--	--	--	--	--	--
8.	Sulphate (as SO <sub>4</sub> )	mg/l	--	--	--	--	--	--	--
9.	Iron (as Fe)	mg/l	--	--	--	--	--	--	--



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

Sr. No.	Test Parameter	Measurement Unit	Test Results						Limit as per Consent Conditions
			Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	
1.	pH value	-	7.16	--	6.96	6.59	--	7.83	5.5 to 9.0
2.	Total Suspended Solids	mg/l	5.60	--	4.80	4.20	--	9.60	100
3.	Biochemical oxygen demand(BOD at 27°C for 3 days)	mg / l	13.0	--	12.3	11.0	--	3.35	100
4.	Chemical oxygen demand (COD)	mg / l	107.1	--	96.0	88.4	--	64.0	250
5.	Oil & Grease	mg / l	BDL(< 0.2)	--	BDL(<0 .2)	BDL(<0 .2)	--	BDL(<0. 2)	10
6.	Total dissolved solids	mg/l	562.0	--	392.0	256.0	--	196.0	2100
7.	Chloride (as Cl)	mg / l	116.4	--	33.1	37.9	--	32.2	600
8.	Sulphate (as SO <sub>4</sub> )	mg/l	50.9	--	67.7	29.8	--	28.9	1000
9.	Iron (as Fe)	mg/l	BDL(< 0.05)	--	BDL(<0 .05)	BDL(<0 .05)	--	BDL(<0. 05)	3.0



1.2 Location : E-3 (Coal Washery)

Sr. No.	Test Parameter	Measurement Unit	Test Results						Limit as per Consent Conditions
			Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	
1.	pH value	-	7.29	7.04	7.05	6.74	--	7.03	5.5 to 9.0
2.	Total Suspended Solids	mg/l	2.60	12.2	22.4	17.6	--	13.8	100
3.	Biochemical oxygen demand (BOD at 27°C for 3 days)	mg /l	BDL(<2 .0)	BDL(< 2.0)	BDL(<2 .0)	BDL(<2 .0)	--	BDL(< 2.0)	100
4.	Chemical oxygen demand (COD)	mg /l	43.7	68.0	79.7	91.9	--	76.0	250
5.	Oil & Grease	mg /l	BDL(<0 .2)	BDL(< 0.2)	BDL(<0 .2)	BDL(<0 .2)	--	BDL(< 0.2)	10
6.	Total dissolved solids	mg/l	740.0	524.0	542.0	1432.0	--	606.0	2100
7.	Chloride (as Cl)	mg /l	172.2	117.6	61.7	323.1	--	122.8	600
8.	Sulphate (as SO <sub>4</sub> )	mg/l	170.1	106.1	96.9	248.2	--	206.2	1000
9.	Iron (as Fe)	mg/l	0.27	0.27	0.21	0.28	--	0.25	3.0



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

Sr. No.	Test Parameter	Measurement Unit	Test Results						Limit as per Consent Conditions
			Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	
1.	pH value	-	7.85	7.91	7.42	6.97	7.24	7.21	5.5 to 9.0
2.	Total Suspended Solids	mg/l	7.40	6.20	22.4	13.2	14.0	12.4	100
3.	Biochemical oxygen demand (BOD at 27°C for 3 days)	mg/l	16.4	14.3	12.8	9.40	10.3	9.10	100
4.	Chemical oxygen demand (COD)	mg/l	136.0	124.0	120.3	108.4	116.0	96.0	250
5.	Oil & Grease	mg/l	BDL(< 0.2)	BDL(<0 .2)	BDL(<0 .2)	BDL(<0 .2)	BDL(< 0.2)	BDL(< 0.2)	10
6.	Total dissolved solids	mg/l	534.0	508.0	492.0	352.0	318.0	286.0	2100
7.	Chloride (as Cl)	mg/l	74.9	67.1	48.1	53.9	53.5	35.5	600
8.	Sulphate (as SO <sub>4</sub> )	mg/l	61.9	58.1	86.9	49.7	54.9	52.7	1000
9.	Iron (as Fe)	mg/l	BDL(< 0.05)	BDL(<0 .05)	BDL(<0 .05)	BDL(<0 .05)	BDL(< 0.05)	BDL(< 0.05)	3.0



1.4 Location : E-5- Pickling ETP Outlet

Sr. No.	Test Parameter	Measurement Unit	Test Results						Limit as per Consent Conditions
			Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	
1.	pH value	-	6.54	--	--	--	6.82	7.72	5.5 to 9.0
2.	Total Suspended Solids	mg/l	20.2	--	--	--	66.4	26.4	100
3.	Biochemical oxygen demand (BOD at 27°C for 3 days)	mg/l	BDL(< 2.0)	--	--	--	BDL(< 2.0)	3.10	100
4.	Chemical oxygen demand (COD)	mg/l	204.0	--	--	--	220.0	240.0	250
5.	Oil & Grease	mg/l	BDL(< 0.2)	--	--	--	BDL(< 0.2)	BDL(< 0.2)	10
6.	Total dissolved solids	mg/l	2096.0	--	--	--	1858.0	2018.0	2100
7.	Chloride (as Cl)	mg/l	589.8	--	--	--	594.8	589.8	600
8.	Sulphate (as SO <sub>4</sub> )	mg/l	52.7	--	--	--	43.7	72.3	1000
9.	Iron (as Fe)	mg/l	BDL(< 0.05)	--	--	--	BDL(< 0.05)	BDL(< 0.05)	3.0



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

Sr. No.	Test Parameter	Measurement Unit	Test Results						Limit as per Consent Conditions
			Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	
1.	pH value	-	7.15	8.04	7.24	7.02	--	7.32	5.5 to 9.0
2.	Total Suspended Solids	mg/l	49.6	34.0	45.0	43.3	--	28.4	100
3.	Biochemical oxygen demand (BOD at 27°C for 3 days)	mg/l	13.6	10.5	9.40	8.20	--	6.68	100
4.	Chemical oxygen demand (COD)	mg/l	198.4	172.0	164.0	148.6	--	140.0	250
5.	Oil & Grease	mg/l	BDL(<0.2)	BDL(<0.2)	BDL(<0.2)	BDL(<0.2)	--	BDL(<0.2)	10
6.	Total dissolved solids	mg/l	1898	1228.0	804.0	1658.2	--	1408.0	2100
7.	Chloride (as Cl)	mg/l	459.9	203.3	136.9	514.8	--	332.2	600
8.	Sulphate (as SO <sub>4</sub> )	mg/l	212.3	123.0	141.1	149.6	--	80.0	1000
9.	Iron (as Fe)	mg/l	0.07	0.06	0.05	0.05	--	0.11	3.0



1.6 Location : E- 8 DRP Nala

Sr. No.	Test Parameter	Measurement Unit	Test Results						Limit as per Consent Conditions
			Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	
1.	pH value	-	6.97	6.59	6.82	6.78	7.63	7.24	5.5 to 9.0
2.	Total Suspended Solids	mg/l	20.4	51.0	24.2	21.3	98.0	28.0	100
3.	Biochemical oxygen demand (BOD at 27°C for 3 days)	mg/l	3.85	5.71	4.30	4.89	6.20	3.10	100
4.	Chemical oxygen demand (COD)	mg/l	95.2	120.0	95.6	112.6	140.0	84.0	250
5.	Oil & Grease	mg/l	BDL(<0.2)	BDL(<0.2)	BDL(<0.2)	BDL(<0.2)	BDL(<0.2)	BDL(<0.2)	10
6.	Total dissolved solids	mg/l	792.0	760.0	508.6	728.1	746.0	760	2100
7.	Chloride (as Cl)	mg/l	131.1	115.8	74.7	116.6	154.9	105.7	600
8.	Sulphate (as SO <sub>4</sub> )	mg/l	266.3	164.3	122.4	193.4	235.9	135.2	1000
9.	Iron (as Fe)	mg/l	BDL(<0.05)	BDL(<0.05)	BDL(<0.05)	BDL(<0.05)	BDL(<0.05)	BDL(<0.05)	3.0

## Annexure 2

Sl. No.	CSR Activity	Actual Expenditure during the financial year 2023-24 and up to 30.09.2024 (Amount in ₹)	Budget allocation for the next 5 years (Amount in ₹)
A	Community Health Improvement	1,99,33,319	
B	Improvement in Community Education, Training and Skill Development Facilities	3,17,46,402	
C	Rural Development Infrastructure activities:		
i	Infrastructure development of the Community area i.e. village road/other work	40,65,334	
ii	Drinking Water and Sanitation	22,63,540	
D	Environment Sustainability and protection of Flora & Fauna	38,78,840	
E	Miscellaneous		
i	Community welfare activities including Swatch Bharat, Promotion of Sports and Cultural activities	79,14,928	
F	Rural Electrification and Renovation of Community Hall	23,57,261	
<b>TOTAL (*)</b>		<b>7,21,59,624</b>	





**Details of CSR Amount allocated to the projects during FY 2023-24 & 2024-25**  
**and expenditure for the year 2023-24 and up to 30.09.2024**

Project S. N.	Name of the Project	Area of Project	Location of the Project	Year of allocation	Year of commencement of Project	Amount allocated for the project (₹)	Amount Spent for the project (₹)
P-3	Construction of Rural Road	State of Maharashtra	Bhandara	FY2022-23	FY2023-24	1,83,99,774	1,34,26,683
	Construction of Rural Road	State of Maharashtra	Bhandara	FY2024-25	FY2024-25	66,00,226	7,47,447
	Total					2,50,00,000	1,41,74,130

<b>GRAND TOTAL (SPENT)</b>	<b>₹ 8,63,33,754</b>
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(\*) – Quarter wise Details given below



**Quarter-wise Details of CSR Expenditure for the year 2023-24 and up to 30.09.2024**

**(Amount in ₹)**

Particulars	Quarter ended 30.06.2023	Quarter ended 30.09.2023	Quarter ended 31.12.2023	Quarter ended 31.03.2024	Quarter ended 30.06.2024	Quarter ended 30.09.2024	Total
Community Health Improvement (Promotion of health care)	59,313	29,94,383	85,388	1,75,699	1,66,17,698	838	1,99,33,319
Improvement in Community Education, Training and Skill Development Facilities	92,083	6,58,708	40,67,198	1,96,99,717	2,42,852	69,85,844	3,17,46,402
Rural Development – Drinking Water and Sanitation	7,61,233	-	-	-	3,03,891	11,98,416	22,63,540
Rural Development – Infrastructure development of the Community area i.e. village road/other work	10,29,188	10,15,684	-	20,20,462	-	-	40,65,334
Environment Sustainability and protection of Flora & Fauna	30,326	12,38,846	92,385	3,45,822	3,99,963	17,71,498	38,78,840
Community welfare activities including Swatch Bharat, Promotion of Sports and Cultural activities	4,86,790	7,04,526	21,01,040	37,88,210	-	8,34,362	79,14,928
Rural Electrification and Renovation of Community Hall	-	5,00,000	9,23,615	2,25,886	1,98,000	5,09,760	23,57,261
<b>TOTAL</b>	<b>24,58,933</b>	<b>71,12,147</b>	<b>72,69,626</b>	<b>2,62,55,796</b>	<b>1,77,62,404</b>	<b>1,13,00,718</b>	<b>7,21,59,624</b>



EXPENDITURE ON CORPORATE SOCIAL RESPONSIBILITY (CSR)							
PROJECT- 2023-24 and Up to 30.09.2024							
Particulars	Quarter ended 30.06.2023	Quarter ended 30.09.2023	Quarter ended 31.12.2023	Quarter ended 31.03.2024	Quarter ended 30.06.2024	Quarter ended 30.09.2024	Total 01.04.23 to 30.09.2024
Project-3 - Rural Development - Construction of Road	20,49,328	-	25,67,190	88,10,165	7,47,447	-	1,41,74,130
TOTAL	20,49,328	-	25,67,190	88,10,165	7,47,447	-	1,41,74,130

GRAND TOTAL (SPENT)	₹ 8,63,33,754
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# Annexure-3

**FY 2023-24**

QuANTIFICATION and REPORTING of  
GREENHOUSE Gas EMISSIONS and  
REMOVALS for SUNflag IRON and  
STEEL Co. LTD.



# Contents

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## Executive Summary

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# Executive Summary

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A GHG emission inventory as per the ISO 14064 was carried out by Sunflag Iron and Steel Co. Ltd. (referred as Sunflag Steel further in this document) for its facility at Bhandara for the purpose of accounting of the company's GHG emissions. The total GHG emissions of Sunflag Steel is accounted to **21,98,723.44 tCO<sub>2</sub>e** for FY2023-24. The major contributors to the GHG emissions were following.

1. Coal and coke consumption as fuel and reducing agent in steel production – **16,27,128.95 tCO<sub>2</sub>e**
2. Electricity consumption – **1,84,009.99 tCO<sub>2</sub>e**
3. Other minor sources in Scope 1 – **695.40 tCO<sub>2</sub>e**

The detailed quantification of total emissions is provided in report.

This report specifically highlights the GHG emissions taking place at existing steel production facility at Bhandara of Sunflag Steel.

Emissions associated with facility's business services and activities were identified and analyzed in this report briefly. Based on the GHG emission calculations, it was observed that the total GHG emissions of facility for the FY23-24 were **21,98,723.44 tCO<sub>2</sub>e**.

Since this study has been carried out for the first time for Sunflag Steel, the base year for the present and future calculations is taken as FY16-17. The GHG footprint of existing production capacity is extrapolated for the proposed plant expansion as well. This is done to respond to a related query from MoEF-CC.

# General Details

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Sunflag Steel has prepared its GHG emissions report to estimate the GHG emissions from its facilities. The content of this report is made in accordance with the clauses of ISO 14064 especially in line with clause 7.3 of ISO 14064-1:2018.

## Purpose and objective of GHG reporting

Sunflag Steel, a leading steel company, has understood the importance of environmental concerns in its policy and simultaneously continues to take various pro-active measures for protection of environment around its projects. It has declared an environmental policy to address environmental concerns around its facility. One of the long term objective of Sunflag Steel is to reduce their environmental impact and strive for sustainable development by adopting best practices in operations and management. It has already implemented and planned various initiatives to reduce GHG emissions such as energy efficiency improvement, green belt development within its facility etc. In its endeavor to comply to statutory requirements, Sunflag Steel has undertaken this carbon footprint study wherein it quantifies and reports its GHG emissions and removals for its facility.

## Intended use and intended user of the report

Sunflag Steel as the intended user will use this report as a basis for framing an action plan that will guide decision making in key areas of its facility that enable study in gradual reduction of its footprint as also inform statutory authority and internal users. The emission has been quantified and reported in this report by the Sunflag Steel's facility at Bhandara.

## Overall and specific responsibilities for preparing and producing the report

Sunflag Steel is responsible over all for preparation of the report. Mr. Sunil Lanjewar (AGM, Environment & Utility) and Mr. V.B. Deshmukh from Sunflag Steel's EHS Department have initiated the process under the guidance of Mr. R.V. Dalvi (Director-Technical). The EHS Department team has been responsible for facility level data collection and documentation. It has interacted with its various departments such as Production, Engineering, HR & Admin, Technical Cell etc. to gather information.

## Products include



### **Flats:**

The spring steel that goes into the automobile and railway suspension. The grades include Silico Manganese, Chrome, Moly, Vanadium steel.

### **Rounds:**

In carbon, free-cutting, spring, CHQ, alloy, bearing and stainless steel. In specifications like: DIN, SAE/AISI, BS etc. In sizes from 15 mm to 160 mm in diameter. For the forging, automobile, spring industries.



### **Round Cornered Squares (RCS):**

In carbon, free-cutting and alloy steels. In specifications like: DIN, SAE/AISI, BS et cetera. In sizes from 50 mm to 160 mm. For the forging, automobile industries.

### **HEX :**

In carbon, free-cutting, alloy steel. In sizes from 13.5 mm to 38.5 mm. For the forging, automobile and industries.

### **Coils :**

In carbon, free-cutting, spring, CHQ, alloy, bearing and stainless steel . In specifications like: DIN, SAE/AISI, BS et cetera. In sizes from 5.5 mm to 38 mm in diameter. For the forging, automobile, spring industries.

### Format of the report

Sunflag Steel has prepared the report in accordance with the requirements of ISO 14064 – 1. The format of report is in keeping with the same.

### Frequency of GHG report

In keeping with the environment policy and objectives, one such being mapping and reducing of its GHG emissions, Sunflag Steel has prepared its first GHG emissions report for the

facility at Bhandara. Sunflag Steel will use the GHG inventory period viz. 2020 -21 as the base year. Sunflag Steel will attempt to report its GHG emission details and performance improvement data at appropriate periodicity (based on management decision).

captured in this report as per the requirements of ISO 14064:2018.

### Data and information of the report

All necessary energy and GHG related information of the facility are



# 1. Organization Profile

Sunflag Iron and Steel Co. Ltd. is a prestigious unit of the SUN FLAG GROUP. The plant is located in the central part of India at Bhandara, Maharashtra and it is 70 kms from Nagpur. The plant has a capacity to produce 7,50,000 tonnes per annum of high quality special steel using liquid pig iron and sponge iron as basic inputs.

The main processes at the plant are,

- Iron making (Mini Blast Furnace, Sponge Iron Plant, Sinter plant).
- Steel Making
- Continuous Casting
- Rolling Mills
- Heat Treatments
- Bright Bar Making
- Inspection
- Quality Assurance

Started as a Spring Steel producer, the company today produces variety of steels. Carbon Steels, Alloy steels, Free & semi free cutting steels, Micro-alloyed steels, Stainless Steels, Spring Steels, Valve Steels, Bearing Steels, Cold Heading Quality Steels, Tool Steels, etc.

The profiles are Round Bars, Round Cornered Square, Round & Hexagonal wire Rods, Hexagonal straight bars, Flats, Bright Bars (Peeled/Drawn/Ground bars) etc.

Sunflag Steel produces majority of the Steel for Automobile use in Engine, Drives, Transmissions, Suspensions etc. applications. Sunflag Steel also supplies steel to Indian Railways, Ordnance Factories, General Engineering & Power sectors.

Apart from catering to the Domestic steel requirements, Sunflag Steel also exports to South East, Middle East, European countries, United States etc.

The Steel is produced using 100% Iron ore as a basic raw material input.

The steel has very low tramp element contents & free from Radioactive or other harmful & hazardous contamination.

Sunflag steel has regular audits and assurance certification from international body like DQS on ISO 9001:2015, IATF 16949:2016 and body like TUV-NORD and ISO-14001:2015 and BS ISO:45001:2018, on Environment, Health and Safety, wherein continuous improvement towards Environment protection is in the road map.

## Corporate Environment, Health and Safety Policy

Sunflag Steel understands the importance of responsible environment management to achieve growth profitability and long-term success and strives to make continuous efforts to protect environment and ecosystem around its facilities. In addition to addressing environmental concerns, it has also installed environmental management systems and encourages employee involvement for improving environmental, health & safety aspects. It has also proactively declared its environmental policy which focuses on adoption of best practices in their operations, resource conservation and waste reduction.

Sunflag is actively engaged in Pollution Control and accredited by EMS Certification.

## Corporate Environment Health and Safety Policy



## 2. GHG Inventory – Roles & Responsibility

Team members of the Bhandara plant EHS Department are responsible for GHG inventory management. AGM, Environment & Utility will undertake and manage the overall GHG activity in coordination with the Sunflag Steel's core EHS team. The inputs to the GHG inventory shall be through documents maintained for production and existing QMS & EMS procedures.

## 3. Principles followed in GHG reporting

The GHG report is in accordance with ISO 14064-1:2018. As described in the standard, Sunflag, Bhandara Steel production facility has followed the five principles i.e. Relevance, Completeness, Consistency, Accuracy and Transparency ensuring that the GHG related information is true and accounted fairly.

Relevant GHG sources and sink in the facility are identified for the purpose of GHG reporting and quantified based on appropriate methodology which is explained in the Chapter 4 of this report. In case of any uncertainty or lack of available data, appropriate assumptions are taken based on the information available publicly on various websites to reduce the uncertainty and associated risk in GHG accounting.

The data collected for the quantification of GHG emission is from the records maintained by various departments of the facility in their logbooks and EMS systems. Gathering of sufficient and appropriate GHG related information will enable the intended users to make decisions with reasonable confidence and will also enable creation of a road map to mitigate its GHG emissions. Since this is the first attempt at inventorisation, it will also enable comparisons going forward.

## 4. GHG Inventory Design & Development

### 4.1. Organization Boundary for Steel production facility

Organization boundary needs to be defined for the purpose of reporting GHG emissions of Sunflag Steel, Bhandara. In accordance with section 4.1 of ISO 14064-

1:2018, Sunflag Steel shall consolidate its facility level GHG emission and removals by the control approach. Sunflag Steel has its operational and financial control over its steel production plant, which includes its process plant comprising various departments. Hence, Sunflag Steel has decided to quantify the GHG emission of this facility and report the same.

Sunflag Steel

Bhandara Steel plant comprising various departments

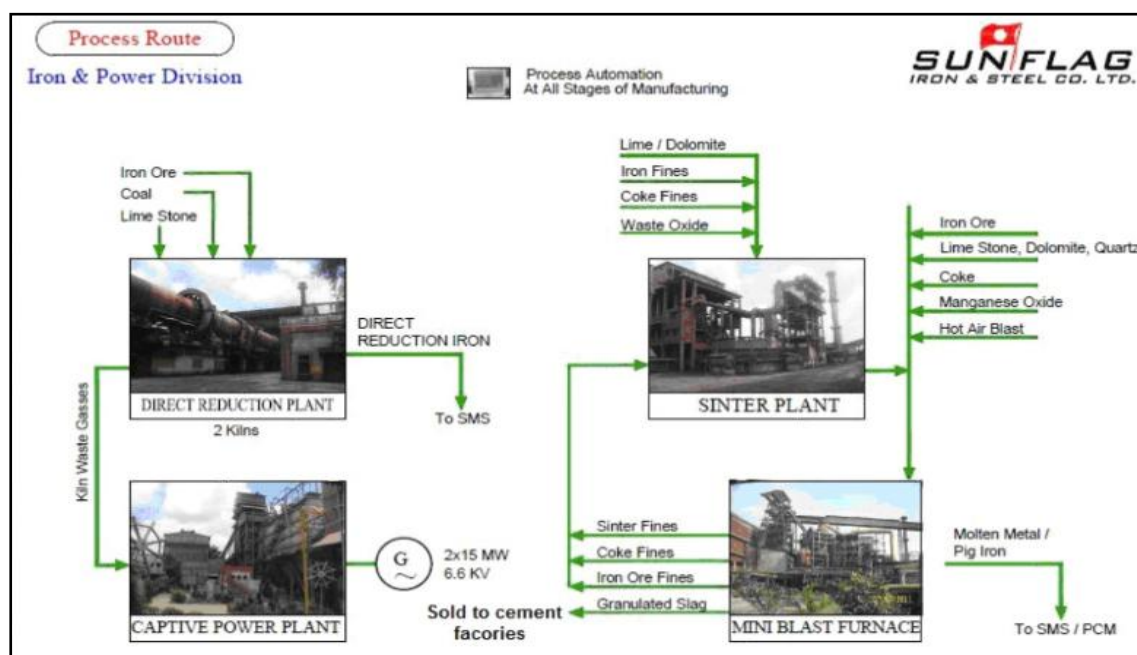
### 4.2. Operational Boundary

Operational boundary establishment includes identifying GHG emission and removals associated with the Sunflag Steel's operations. The GHG emission and removals is categorized in to direct emissions (Scope 1) and energy indirect emissions (Scope 2).

#### 4.2.1 Establishing the operational boundaries

GHG emissions emanate largely from fossil fuels, reducing agents and raw materials consumption in the steel production process; purchased electricity consumption; diesel consumption in DG sets; refrigerant gas consumption and air conditioning units of company. Energy efficiency projects and plantation within the facility's organizational boundary may act as carbon sinks.

The following process layout gives processes involved and material flows in the steel production plant at Sunflag Steel.



### Configuration of existing units

Products	Maximum Quantity	UOM
Sinter	850000	MT/A
Direct reduced iron (captive)	280000	MT/A
Pickling of stainless steel & carbon steel (intermediate)	66000	MT/A
Coin blanks from rolled steel products (finished)	9600	MT/A
Hot metal from blast furnace (captive)	450000	MT/A
Continuous cast billets (intermediate)	1025000	MT/A
Rolled steel products (finished)	750000	MT/A
Oxygen/Nitrogen/Argon (captive)	45000	MT/A
Additional facilities as rolling mill, bell & annealing furnace, etc.	5	Nos./Y
Electricity (captive)	30	MW
Refining stainless steel converter (intermediate)	288000	MT/A
Coiling of steel bars (intermediate)	18000	MT/A
DRI Ash/Char (By product)	15000	MT/A

The GHG emission and removal activity of Sunflag Steel, Bhandara facility is presented in the table below:

Activity	GHG Activities	Scope
Activity 1	Coal, LPG, FO, LDO, diesel consumption	Scope 1
Activity 2	Coke and other reducing agents and raw materials consumption	Scope 1
Activity 3	Electricity purchased from grid	Scope 2
Activity 4	Diesel Consumption in DG Sets	Scope 1
Activity 5	Fugitive emissions from chillers	Scope 1
Activity 6	Leakage from CO2 type fire extinguishers	Scope 1
Activity 7	CO2 type fire extinguishers refilled	Scope 1
Activity 8	Methane emissions from septic digesters	Scope 1
Activity 9	Employee Commute	Scope 3
Activity 10	Raw material Import and Export of end-product	Scope 3

In the future years, if any additional GHG emissions and GHG removals are identified within the organizational boundary, facility will account those activities in its GHG report and shall provide the explanation for changes to its operational boundaries.

#### 4.2.2 Direct GHG emissions and removals

The direct GHG emissions for the Sunflag Steel is mainly from use of fossil fuels and reducing agents, raw materials used in the steel production process i.e. coal, coke, LPG, diesel consumption etc.

Apart from the above mentioned direct GHG emission sources, CO<sub>2</sub> emissions from the extinguisher; diesel consumption in DG sets; methane emissions from septic digester are also accounted.

Direct GHG emissions quantified 16,27,128.95 tCO<sub>2</sub>e and quantification of direct emission is explained in the below section.

#### 4.2.3 Energy indirect GHG emissions

The consumption of purchased electricity from the grid i.e. electricity generated from outside the organizational boundary contributes to the indirect GHG emission for the steel production facility. Electricity is the major form of energy utilized for its operations and administrative purposes.

GHG emissions due to purchased electricity in Sunflag Steel, Bhandara is 1,84,009.99 tCO<sub>2</sub>e and its quantification is explained in the sections below.

#### 4.2.4 Exclusions

The plant contracts external manpower for small civil and other maintenance, assembling works. The vehicles used for these works, welding-cutting gas consumed etc. is also excluded from the GHG calculations here.

#### 4.2.5 Other indirect GHG emissions

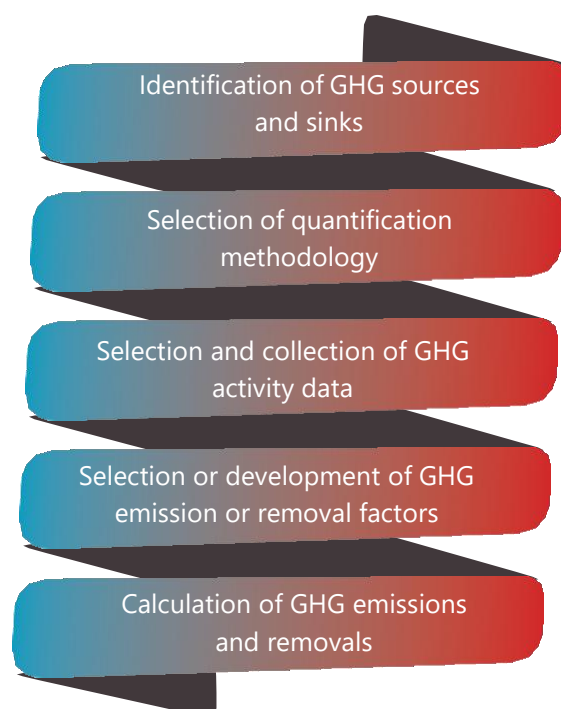
The scope 3 emissions from major inbound raw materials transport, end product export and employee commute for business is calculated at 4,20,044.57 tCO<sub>2</sub>e.

### 4.3 Quantification of GHG emissions and removals

Sunflag Steel has quantified and documented its emissions from different sources based on its emission activity data, selected quantification methodology and emission factor.

#### 4.3.1 Quantification steps

Sunflag Steel has quantified and documented the GHG emissions and removals within the organizational boundary applying following steps:



#### 4.3.2 Identification of GHG sources and sinks

Sunflag Steel has identified its GHG sources and sinks according to scope of emissions i.e. Scope 1, Scope 2 and Scope 3 from its organization boundary which are categorized as follows

Scope	GHG Activities	GHG Sources
Scope 1	Fuels, reducing agents, few raw materials combustions in process, DG Sets etc.	GHG emissions resulted from combustion of coal, coke, LPG, diesel etc.
Scope 1	Emissions due to Freon-22 and other refrigerants' refill	GHG emissions from chillers
Scope 1	Emissions from fire extinguishers	CO <sub>2</sub> emissions from CO <sub>2</sub> based fire extinguishers refilled in the reporting year
Scope 1	Emissions due to human waste	Methane emissions in septic digester
Scope 2	Consumption of purchased electricity	Grid emission source as power procured from grid
Scope 3	Inbound raw materials transport and End-product Export	CO <sub>2</sub> emissions from fuel and electricity used in transportation (railways and road transport)
Scope 3	Employee commute for business	Contracted and personal vehicles used by employees for daily commute to work and return, other business travel outside plant

Sunflag Steel is procuring power from the grid. In case, it procures imported electricity from another supplier, the same will document the supplier separately as per the accounting standard. As required by the ISO 14064-1:2018, Sunflag Steel has separately identified and documented the GHG sources contributing to its GHG emissions in the above table.

#### 4.3.3 Selection of quantification methodology

Sunflag Steel has quantified its GHG emissions by calculation based on:

- Use of emission calculation tool
- GHG activity data multiplied by GHG emission factor from World Steel Methodology

It is economically an unviable option to directly measure the GHG emissions from the identified GHG emission activity/source by means of instruments or investing in measurement technologies. Hence, Sunflag Steel opted to use the calculations to quantify its GHG emissions at Sunflag Steel. However, for some activities the information is collected by recording the readings (like electricity) from the meters available on the site;

The methodologies used in the tool are based on factors presented in the World Resources Institute's (WRI) Corporate Protocol Standard for organizations estimating GHG emissions as well as methodologies and factors presented by the Intergovernmental Panel on Climate Change's (IPCC) 2006 Guidelines for National Greenhouse Gas Emission Inventories and from World Steel Methodology. For the purpose of accounting the GHG emissions from GHG activities like fossil fuel combustion process operations; electricity consumption; Sunflag Steel has used the calculation "GHG activity data multiplied by GHG emission factor".

#### 4.3.4 Selection and collection of GHG activity data

GHG activity data used to quantify GHG emissions is selected as per the quantification methodology described above and collected by Sunflag Steel.

As per clause 2.11 of ISO 14064-1:2018, GHG activity data is defines as "quantitative measure of activity that results in a GHG emission or removal. GHG activity data include the amount of energy, fuels or electricity consumed, material produced, service provided or area of land affected."



Brief description on selection of activity data is presented below:

### Scope 1

#### *a. Use of fossil fuel in process/operations*

Selected quantification methodology = Activity data x GHG emission factor

Selected activity data = Consumption of coal/NG/diesel

The activity data i.e. amount of energy consumed in the process/operations is calculated from the fuel consumption records. The fuel consumption is maintained and collected by concerned department of Sunflag Steel.

#### *b. Fugitive emission from chillers and Air-conditioning units*

Selected quantification methodology = Activity data x GHG emission factor

Selected activity data = Refrigerant recharged

The activity data i.e. refrigerants recharged is being collected from the Stores department which is maintained in the EMS.

#### *c. Emissions from CO<sub>2</sub> type fire extinguisher re-filled*

Selected quantification methodology = Activity data x GHG emission factor

Selected activity data = Total number of CO<sub>2</sub> based fire extinguishers refilled

#### *d. Tree plantations*

Selected quantification methodology = Activity data x kg of carbon sequestered/year x Carbon to CO<sub>2</sub> conversion factor

Selected activity data = Number of trees of each type x Maturity period x Survival rate

The activity data of species wise plantation details/year along with the survival rate is maintained by Horticulture / Environment Department. Based on the research studies, it is considered that every tree sequesters on an average 1 kg of CO<sub>2</sub>/year till the maturity period.

#### *e. Methane emissions from septic digester*

Selected quantification methodology = Activity data x conversion factor

Selected activity data = Number of permanent employees of the Sunflag Steel x Number of working days in reporting year

The activity data of number of permanent employees and working days is maintained in the HR files.

### Scope 2

#### *a. Consumption of purchased electricity in operations*

Selected quantification methodology = Activity data x GHG emission factor

Selected activity data = amount of electricity consumed

Consumption of electricity is measured by electricity meter and the data is collected from electricity bills of the Sunflag Steel in operations of all departments.

As per the 'GHG Protocol Scope 2 Guidance, An amendment to the GHG Protocol Corporate Standard' pg. 45, if any 'energy-consuming facilities located in areas where grid customers can be provided with product or supplier-specific data in the form of certificates, contracts with generators or suppliers for specified source electricity, supplier labels, supplier emission rates, green tariffs, contracts, residual mixes, or other contractual instruments' condition is not met, then location based emission factor (grid average) has to be used.

#### **4.3.5 Selection or development of GHG emission or removal factors**

In order to quantify the GHG emissions, Sunflag Steel has selected the GHG emission factor from recognized origins. The GHG emission or conversion factor is mainly selected from four major guidelines which are published by:

- Intergovernmental Panel on Climate Change (IPCC): "Guidelines for National Greenhouse Gas Inventories, 2006"
- Central Electricity Authority, Ministry of Power, Government of India: "Baseline Carbon Dioxide Emission Database"

The emission factors have been selected from the above listed guidelines/publications appropriate for the GHG source or sink concerned. Latest version of GHG emission factor guidelines are used to compute the GHG inventory of Sunflag Steel and GHG emission factor details are presented below:

S.No	Parameter	Value	Unit	Remark/Source
1	CO <sub>2</sub> emission factor of diesel	74.1	tCO <sub>2</sub> /TJ	IPCC 2006 Guidelines for National Greenhouse Gas Inventories, 2006 ( <a href="http://www.ipcc-nggip.iges.or.jp/public/2006gl/vol2.html">http://www.ipcc-nggip.iges.or.jp/public/2006gl/vol2.html</a> ), Table 1.4 - Default CO <sub>2</sub> emission factors for combustion
2	CH <sub>4</sub> Default emission for diesel	3	kgCO <sub>2</sub> /TJ	IPCC 2006 Guidelines for National Greenhouse Gas Inventories, 2006 ( <a href="http://www.ipcc-nggip.iges.or.jp/public/2006gl/vol2.html">http://www.ipcc-nggip.iges.or.jp/public/2006gl/vol2.html</a> ) Table 2.2 - Default emission factors for stationary combustion in the energy industries
3	N <sub>2</sub> O Default emission for diesel	0.6	kgCO <sub>2</sub> /TJ	IPCC 2006 Guidelines for National Greenhouse Gas Inventories, 2006 ( <a href="http://www.ipcc-nggip.iges.or.jp/public/2006gl/vol2.html">http://www.ipcc-nggip.iges.or.jp/public/2006gl/vol2.html</a> ) Table 2.2 - Default emission factors for stationary combustion in the energy industries
4	Effective CO <sub>2</sub> emission factor of coal	95.8	tCO <sub>2</sub> /TJ	World Steel Association, CO <sub>2</sub> emissions data collection, User Guide, ver. 7, Appendix 4 - Direct emission factors, Pg. 14 ( <a href="http://cea.nic.in/reports/others/thermal/tpece/cdm_co2/user_guide_ver10.pdf">http://cea.nic.in/reports/others/thermal/tpece/cdm_co2/user_guide_ver10.pdf</a> )
5	CH <sub>4</sub> Default emission for coal	1	kgCO <sub>2</sub> /TJ	IPCC 2006 Guidelines for National Greenhouse Gas Inventories, 2006 ( <a href="http://www.ipcc-nggip.iges.or.jp/public/2006gl/vol2.html">http://www.ipcc-nggip.iges.or.jp/public/2006gl/vol2.html</a> ) Table 2.2 - Default emission factors for stationary combustion in the energy industries
6	N <sub>2</sub> O emission factor for coal	1.5	kgCO <sub>2</sub> /TJ	IPCC 2006 Guidelines for National Greenhouse Gas Inventories, 2006 ( <a href="http://www.ipcc-nggip.iges.or.jp/public/2006gl/vol2.html">http://www.ipcc-nggip.iges.or.jp/public/2006gl/vol2.html</a> ) Table 2.2 - Default emission factors for stationary combustion in the energy industries
7	CO <sub>2</sub> emission factor of Natural Gas	56.1	tCO <sub>2</sub> /TJ	IPCC 2006 Guidelines for National Greenhouse Gas Inventories, 2006 ( <a href="http://www.ipcc-nggip.iges.or.jp/public/2006gl/vol2.html">http://www.ipcc-nggip.iges.or.jp/public/2006gl/vol2.html</a> ) Table 1.4 -Default CO <sub>2</sub> emission factors for combustion
8	CH <sub>4</sub> Default emission for Natural Gas	1	kgCO <sub>2</sub> /TJ	IPCC 2006 Guidelines for National Greenhouse Gas Inventories, 2006 ( <a href="http://www.ipcc-nggip.iges.or.jp/public/2006gl/vol2.html">http://www.ipcc-nggip.iges.or.jp/public/2006gl/vol2.html</a> ) Table 2.2 - Default emission factors for stationary combustion in the energy industries
9	N <sub>2</sub> O emission factor for Natural Gas	0.1	kgCO <sub>2</sub> /TJ	IPCC 2006 Guidelines for National Greenhouse Gas Inventories, 2006 ( <a href="http://www.ipcc-nggip.iges.or.jp/public/2006gl/vol2.html">http://www.ipcc-nggip.iges.or.jp/public/2006gl/vol2.html</a> ) Table 2.2 - Default emission factors for stationary combustion in the energy industries
10	Electricity factor of Grid	0.82	t-CO <sub>2</sub> /MWh	The Central Electricity Authority, "Baseline Carbon Dioxide Emission Database"
11	Emissions from septic digester	25.50	gCO <sub>2</sub> /capita.d	Page 15, Table ES-1, Evaluation of GHG emissions from septic systems ( <a href="http://www.geoflow.com/wastewater/w_pdfs/WERF%20Report.pdf">http://www.geoflow.com/wastewater/w_pdfs/WERF%20Report.pdf</a> )
12	Emission factor of iron	0.172	tCO <sub>2</sub> /ton	World Steel Association, CO <sub>2</sub> emissions data collection, User Guide, ver. 7, Appendix 4 - Direct emission factors, Pg. 14
13	Emission factor of dolomite	0.471	tCO <sub>2</sub> /ton	
14	Emission factor of lam coke	3.257	tCO <sub>2</sub> /ton	
15	Emission factor of limestone	0.44	tCO <sub>2</sub> /ton	
16	GWP of R-22	1,760	tCO <sub>2</sub> /ton	<a href="http://www.ghgprotocol.org/sites/default/files/ghgp/Global-Warming-Potential-Values%20%28Feb%2016%202016%29_1.pdf">http://www.ghgprotocol.org/sites/default/files/ghgp/Global-Warming-Potential-Values%20%28Feb%2016%202016%29_1.pdf</a>
17	GWP of R-134a	1,300	tCO <sub>2</sub> /ton	

In case of any modifications/ changes in GHG emission factor used by the organization, Sunflag Steel will provide explanation where appropriate (like in consequent year GHG reporting or recalculation of base year GHG inventory).

#### 4.3.6 Calculation of GHG emission and removals

Sunflag Steel has calculated the GHG emissions and removals in accordance with the quantification methodology that minimizes uncertainty and calculated in a manner intended to yield accurate and reproducible result for its identified Scope 1, Scope 2 and Scope 3 under the organizations GHG inventory. The calculation is based on GHG activity data multiplied by GHG emission or removal factors.

## 5. GHG Inventory Components

GHG emissions of the Sunflag Steel from the selected organizational and operational boundaries are discussed under this section.

### 5.1. GHG emissions and removals

Sunflag Steel has quantified its emission in accordance with clause 4 of ISO 14064-1:2012 same is presented below:

Scope	GHG Activity	GHG Emission (tCO <sub>2</sub> e)
Scope 1	Coal, LPG, FO, LDO, diesel consumption	6,50,096.29
Scope 1	Coke and other reducing agents and raw materials consumption	9,43,877.19
Scope 2	Electricity purchased from grid	1,84,009.99
Scope 1	Fugitive emissions from chillers	691.06
Scope 1	CO <sub>2</sub> type fire extinguishers refilled	4.3474
Scope 1	Methane emissions from septic digesters	0
Scope 3	Employee Commute	1082.89
Scope 3	Raw Materials Import and End-product Export	4,18,961.67
	Total	<b>21,98,723.44</b>

### 5.2 Organizational activities to reduce GHG emission or increase GHG removals

Measures have been identified by Sunflag Steel to enable its facility to mitigate the GHG emissions based on the quantification performed. GHG emission is maximum due to scope 1 activities.

#### 5.2.1 Directed actions

##### Energy

The directed action of Sunflag Steel includes energy management initiatives.

##### Energy Efficiency

To minimize the energy consumption as per the energy and environmental policy of corporation, proactive measures are taken like computer power management, energy saving devices and low power consuming lighting devices.

##### Green belt development

The facility has been proactively engaged in tree plantation activities around its facilities to promote development of greenbelt. The facility will continue to engage in increasing the green cover around its facilities.



## 5.3 Base-year GHG inventory

### 5.3.1 Selection and establishment of base year

Sunflag Steel is reported its GHG emission inventory for the first time in the year 2016-17 and, therefore, the same year is selected as base year. It has quantified its base year GHG emission with the complete single financial year data i.e. 01 April 2016 to 31 March 2017. Its base-year GHG inventory was 13,22,569 tCO<sub>2</sub>e, the emissions in FY 23-24 are 21,98,723.44 tCO<sub>2</sub>e which are more than the Base year.

Sunflag Steel may choose to change its single base year to multi-year average or rolling year average. In that case, it will explain the reason for base year change in the respective GHG reporting.

### 5.3.2 Recalculation of GHG inventory

Sunflag Steel is reported its GHG inventory for the first time in the year 2016-17. The base year inventory will be revised and recalculated if organizational and/or operational boundary of the GHG inventory changes in future years.

## 5.4 Assessing and reducing uncertainty

Due to non-availability of verifiable data for computing the GHG emission especially in scope 1 emission calculations, Sunflag Steel has made certain assumptions. The assumption data are described below and the uncertainties in each data are reported.

### Uncertainty Potential Assessment

S.No	Parameter	Value	Unit	Remark/Source	Parameter Uncertainty potential status (Y/N)
1	Electricity emission factor	5	%	The emission factor of a large grid is used in absence of clarity on specific power plants that supplied electricity	Y
2	Emission factors for reducing agents	5	%	Used default from the World Steel Association (WSA)	Y
3	NCV of fuels	5	%	has not used weighted average	
4	Usage factor of washroom per day	10	%	Assumption	Y

## 6. GHG Inventory Quality Management

For the purpose of maintaining accuracy in GHG inventory, Sunflag Steel has established the quality management system for the GHG data which is briefed in the subsequent section.

### 6.1 GHG Information Management and procedure

#### GHG Management team and GHG Inventory

The team members of the EHS Department are assigned to estimate the emissions inventory of the Sunflag Steel. The management shall periodically review the responsibility and authority of those responsible for GHG inventory development by internal reviews.

#### Training for Inventory development team members

- Sunflag Steel shall be responsible for providing training to inventory development team
- Training shall be offered internally or through third party.
- Concerned employee has been imparted training for Carbon footprint measurement methodology.

#### Identification and Review of organization boundaries

- Sunflag Steel shall identify its organization boundary as per the requirements of ISO 14064-1:2018.
- Sunflag Steel shall report the changes in organization boundary with necessary documentation and justification.

#### GHG sources and sinks

- Sunflag Steel shall identify its GHG sources and sinks as per ISO 14064 requirements.
- All Scope 1, Scope 2 and Scope 3 emission sources and sinks within the boundary shall be identified on accounting the GHG emission in the selected organization boundary. If any of the GHG source is not considered for accounting, the reason for not considering the GHG source or sink within the scope shall be explained.
- Additional GHG source or sink shall be identified and accounted within the organization boundary

#### Quantification methodologies, GHG activity data and GHG emission and removal factors

- Quantification of the GHG emission within its organization boundary shall be conducted following the methodology established by ISO 14064, UNFCCC, IPCC, WSA and other relevant standards/mechanisms.
- Sunflag Steel shall use the appropriate, relevant and updated methodologies to quantify its GHG emission.
- Sunflag Steel shall periodically review on methodologies carried out and shall explain any changes to quantification methodologies previously used by the organization.
- Sunflag Steel shall select its activity data as per Scope 1, Scope 2 within organization boundary.
- Sunflag Steel shall use the appropriate, relevant and updated GHG emission and removal factors from UNFCCC publications, IPCC publications, host country emission data publications, another relevant climate change bodies to quantify its GHG emission.
- Periodic review on emission and removal factor data publications shall be carried out by Sunflag Steel in order to use updated emission factors or removal factor.

#### Review of the application of quantification methodologies to ensure consistency across multiple facilities

- Sunflag Steel shall maintain consistency by using appropriate quantification methodologies of GHG emissions for multiple facilities published/discussed by UNFCCC or IPCC or ISO 14064 standard or other relevant standards/mechanisms.

#### Use, maintenance and calibration of measurement equipment

- Records shall be maintained related to operation and maintenance of all equipment (like electricity meter etc.), related to measurement of data's for GHG emission accounting.
- The facility shall maintain the records of calibrated equipment to ensure error free operation.

### Development and maintenance of a robust data-collection system

- Data collection system shall be established by following the standard format for data collections related to GHG emission accounting.

### Regular accuracy checks

- Sunflag Steel shall review the quality of data annually and establish the data collection system to achieve accuracy.
- Sunflag Steel shall do calibration of meters used annually for GHG emission accounting data collection.

### Periodic internal audits and technical reviews

- Sunflag Steel shall conduct an internal audit on quality and accuracy of GHG emission information by checking evident documents and technical reviews.

### Periodic review of opportunities to improve information management processes

- Technical review and internal audits shall be conducted periodically to identify opportunities improving information management process.

## 6.2 Document retention and record keeping

Documentation supporting the design, development and maintenance of the inventory is retained to support the verification process and provide a historical record. In determining what information needs to be retained the following principles are applied:

1. At any point in time, all past emissions inventories should be able to satisfy an audit.
2. At any point in time, any past emissions inventory should be able to be recalculated from the retained records.

Following methods can be used to maintain the relevant data:

- EMS/SAP system to retrieve the GHG related data for computing GHG inventory.
- Standard format for GHG data collection are established and data is periodically entered into the customized format.

Following information are required to be retained:

- The procedures, processes, and methodologies used to estimate the emissions inventory and relevant sources.
- All emission factors and their sources.
- All activity data, activity data models, and their sources.
- All models.
- All supporting documentation and sources.
- The emissions inventory, reported at the facility level.

## 7. GHG Information monitoring and procedure

The following GHG activity data are required to be monitored for establishing GHG inventory for Sunflag Steel:

- Annual electricity purchased
- Amount of fuels, other reducing agents and raw materials consumed
- Amount of diesel consumed in on-site DG sets
- Amount of refrigerant gas refilled in air conditioning units (chillers and window - split ACs, centralized) and water coolers; Type of refrigerants gas used.
- Total number of CO2 type fire extinguisher with their capacity, Number of CO2 type fire extinguisher refilled with their capacity.
- Total manpower of the facility (regular/ permanent staff).
- Number of working days in the reporting period.

The results of study are summarized as below.

21,98,723.44

Total GHG emission (tCO<sub>2</sub>)  
(Capacity)

## Measures that could be considered for reducing the GHG emissions


Every tonne of steel produced in 2018 emitted an average of 1.85 tonnes of carbon dioxide, equating to almost 8 percent of global carbon dioxide emissions. <sup>2</sup> However, the industry now needs to cope with the pressure to reduce its carbon footprint from both environmental and economic perspectives. Currently, the steel industry is among the three biggest producers of carbon dioxide, with emissions being made in a limited number of locations; steel plants are therefore a good candidate for decarbonization. While the industry must adapt to these new circumstances, it can also use them as a chance to safeguard its license to continue running in the long term.

Below listed are some of the decarbonization strategies and running pilot plants to assess different production technologies,

- Optimizing the BF burden mix by maximizing the iron content in raw materials to decrease the usage of coal as a reductant,  
Increase the use of fuel injection through, for example, pulverized coal injection (PCI), natural gas, plastics, biomass, or hydrogen (as an additional reagent on top), or
- Using coke oven gas in the BF as an energy source, just to name some of the options. These processes may have the potential to decrease carbon dioxide emissions without eliminating them, but do not offer fully carbon-neutral steel production.
- Biomass reductants: This process uses biomass, such as heated and dried sugar, energy cane, or pyrolyzed eucalyptus, as an alternative reductant or fuel. As such it is regionally dependent and mainly important in areas where the biomass supply is guaranteed, like in South America or Russia. In Europe, the availability of biomass is likely not enough to reduce carbon emissions on a large scale.
- Increased share of scrap-based EAFs: This process maximizes secondary flows and recycling by melting more scraps in EAFs. EAF producers are more environmentally friendly and flexible to the ups and downs of demand. However, shifting to EAF-based steel production requires the future supply of renewable electricity to be commercially available, as well as a sufficient supply of high-quality steel scrap. High-quality scraps are necessary for the production of high-quality products, which  
are nowadays mainly produced through the integrated route. If high-quality scrap is not available, lower-quality scraps can be mixed with DRIs to ensure high-quality EAF inputs.
- Optimize inbound and outbound logistics to reduce scope 3 emissions
- Increase greenbelts with species absorbing more CO<sub>2</sub>, such as Teak, Nilgiri, Babul, Neem, etc.
- Evaluating renewable energy from power exchange and feasibility of rooftop solar plants

## Long-Term Strategies For Carbon Neutrality by 2030

- Greater use of electricity produced from renewable sources i.e., up to 60%, could dramatically reduce CO<sub>2</sub> emissions from iron and steel production.
- Fossil fuel-based carbon is widely used in iron and steelmaking in a number of forms, and the replacement of these materials with renewable carbon derived from biomass offers the greatest potential to reduce the greenhouse gas footprint of steel production.
- Coke is traditionally used in BFs to generate CO and heat for smelting iron ore to produce hot metal. Many steel companies use pulverized coal injection in BFs to reduce the amount of Coke, and hence the cost of raw material. Plastics can replace coke or pulverized coal for the reduction reaction. Injection of plastic waste in the BF allows a reduction in coke usage.
- Increase the greenbelt with species absorbing more CO<sub>2</sub>, such as Teak, Nilgiri, Babul, Neem etc.

CARBON ELIMINATOR			Carbon sequestration in lakh tons for a tree with girth between 10-30 cm
Scientific name	Local name	Carbon sequestration	
Tectona grandis	Sagwaan	3.70	
Eucalyptus globulus	Nilgiri	2.47	
Prosopis juliflora	Gando baval	1.67	
Azadirachta indica	Limdo	1.45	
Casuarina equisetifolia	Sharu	1.28	
Acacia tortilis	Israeli baval	1.04	

(Reference - <http://economictimes.indiatimes.com/city/ahmedabad/teak-absorbs-max-co2-from-air-helps-check-global-warming/printarticle/51721854.cms>)

### Bio-medical waste data from Apr-2023 to March-2024

Month	Quantity in Kg
Apr-2023	2.750
May-2023	2.030
Jun-2023	4.320
Jul-2023	2.600
Aug-2023	3.400
Sep-2023	4.700
Oct-2023	3.360
Nov-2023	2.000
Dec-2023	4.000
Jan-2024	1.400
Feb-2024	5.800
Mar-2024	4.850
<b>TOTAL</b>	<b>41.210 Kg</b>

# **Environmental Quality Report for the month of September 2024**

**M/s. SUNFLAG IRON & STEEL CO. LTD.  
Village – Eklari (Warthi),  
Tai-Mohadi, Dist-Bhandara.**

*Monitored & Analysed by*

**EARTHCARE LABS PVT. LTD.,  
C-11 , Amar Enclave Commercial Wing,  
Jog Layout, Prashant Nagar,  
Near Ajni Square,  
Nagpur – 440 015.**

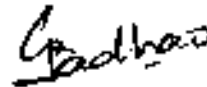
## **Foreword**

*Sunflag Iron & Steel Co. Ltd., known by the acronym Sunflag Steel, has created a distinct niche in Special steel & Alloys and attained the position of market leader in this segment. Sunflag Steel has an Integrated Steel Plant near village- Eklari, Bhandara Road, Dist.-Bhandara, Maharashtra set up in the year 1989.*

*Sunflag Steel has entrusted the job of environmental quality monitoring and analysis as per MoEFCC & MPCB norms to Earthcare Labs Pvt. Ltd., Nagpur.*

*This monthly report comprises of data on monitoring & analysis for the September 2024 is presented herewith. It is hoped that report will certainly help to get the idea of environmental scenario of the factory.*

*The co-operation extended by the Staff and Management of Sunflag Steel during the study period is gratefully acknowledged.*



**(C. P. Jadhao)**  
**EARTHCARE LABS PVT. LTD.**



## 1.0 Introduction

The Sunflag group was founded in 1937. The group has its operations spread over 6 countries covering 3 continents with diversified range of activities.

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 Industrietechnik, West Germany. This factory is one of the most modern deploying state-of-the-art technology 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 ISO 9001 certified company and the factory has also obtained Quality System Certification from International body like DQS on ISO 9001:2015, IATF 16949:2016 and TUV-NORD on ISO 14001:2015 and BS OHSAS : 45001:2018. The most sophisticated quality system of the world.

Sunflag Steel caters to the demands of various core sector industries like Automobiles, Railway Defence and Agriculture Engineering Industry etc.

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. 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.

The Integrated Steel Plant has a capacity @ 1.0 Million Tonnes per Annum 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). Sinter plant is also provided for utilization of solid waste generated from process & raw materials and converted in to get cost effective raw material for MBF. 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 Bloom 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, operated on waste heat recovery generated from DRP and solid waste generated from DRP.

Sinter plant is also installed which is useful to convert various solid wastes into Sinter which is used as raw material in Mini Blast Furnace.

Quality effectiveness of steel produced is the result of the use of state-of-art technology along with computerized process control and monitored operating parameters.

Sunflag Steel has TPM methodology where continuous improvement towards production, safety and environment is a must. Management gives top priority to environment conservation and regularly continuous improvement projects for better pollution control are executing. Operation & maintenance of all pollution control systems is a regular feature and up-gradation/modifications of the pollution abatement system are undertaken logistically.

## **2.0 Process Description**

Sunflag Steel is manufacturing rolled steel products as finished product with direct reduced iron, hot metal as well as continuous cast billets as intermediates. Electricity generation is exclusively for captive consumption. The process of integrated steel plant and captive power plant are discussed below.

### **2.1 Integrated Steel Plant**

The direct reduced iron process (DRP) involves reduction of sized iron ore with the addition of coal and dolomite in inclined rotary kiln. The iron ore and coal tumbling down the kiln react in the presence of oxygen of the air and iron ore gets reduced to iron. The reduced iron is discharged into cooler where it is cooled by spraying water and conveyed through conveyors for magnetic separation and subsequent storage/consumption. The flue gases of the kiln are further burnt in waste Heat Recovery Boiler (WHRSG) to produce high pressure steam for Captive Power Plant consumption. WHRSG is provided with Electrostatic Precipitator (ESP). Fugitive Dust Emission sources of the DRP are also provided with bag filters.

In the Mini Blast Furnace (MBF), the raw material mix i.e. coke, iron ore and fluxes travels down the shaft while air is blown in at pressure up the shaft. The molten iron and slag by product is drawn out from the bottom of the furnace. The hot metal is taken away in the ladle and utilize as a raw material to the steel melting shop.

The steel making process (SMS) involves melting of direct reduction iron, steel scrap etc using electricity & addition of hot metal of MBF in Electric Arc Furnace (EAF). Refining of molten steel in stainless steel refining convertor (AOD) & Vacuum Degassing (VD) plant & Ladle Heating Furnace (LHF) and achieving the desired chemistry of molten steel by addition of alloying elements and heat energy as well as quality improvement in and casting of the liquid steel into billets of 130/160/210\*232 mm etc cross section in Continuous Casting Machine (CCM). The emission of EAF, AOD and LHF are cleaned in air pollution control system with bag filters.

The Bar & Section Mill (BSM), Alloy Steel Mill (ASM) & Bloom Mill process consists of reheating of the billets produced in CCM to the hot rolling temperature of 1200oC achieved Light Diesel Oil (LDO) & Furnace Oil (FO) fired walking hearth reheating furnaces. The rolled steel products are cut into required sizes and stacked in the storage area by means of overhead cranes.

### **2.2 30 MW Captive Power Plant**

The waste gases from the DRP kiln exhaust are passed through WHRSG boiler that is top supported and is a three pass natural circulation boiler. A separate FBC boiler consumes the by-products of DRP such as DRI ash, ESP dust and coal fines as fuel. The steam generated at the boilers is conveyed to 30 MW condensing turbine with one uncontrolled extraction for de-aerator to generate electricity. FBC boiler emissions are cleaned in separate ESP and through stack of adequate height cleaned emissions are discharged to atmosphere. The generated electricity is distributed to various units of the steel plant for captive consumption.



### 3.0 Scope of Work

Regular stack monitoring of minimum any nine stacks every week, four ambient air quality stations twice in a week as per CPCB Guidelines, five location for fugitive emission monitoring every month, four ambient noise levels and two effluents samples every week are monitored. The details of the stacks location, ambient air quality monitoring stations, fugitive dust monitoring locations, effluent collection points and ambient noise levels measurement stations are given below:

#### 3.1 Stacks

- i) S-2 Reheating Furnace (ASM) S-1
- ii) S-3 FBC Boiler ESP (CPP)
- iii) S-4 Reheating Furnace (BSM)
- iv) S-5 APC System to EAF & LHF (SMS)
  - a. ESP to WHRSG Boiler for Kiln (DRP-1)
- v) S-7 DES-II De-Dusting System of Discharge Cooler (DRP-I)
- vi) S-8 Wet Scrubber for Discharge Cooler (DRP-1)
- vii) S-9 4.0 TPH Oil Fired Boiler for FO Storage Tank Heating
- viii) S-11 MBF Stove
- ix) S-20 Pickling Line (Coinage Plant)
- x) S-21 Centralized Pickling Plant
- xi) S-23 Head ESP (Sinter Plant)
- xii) S-24 Tail ESP (Sinter Plant)
- xiii) S-27 Flux Crusher De-Dusting System (Sinter Plant)
- xiv) S-28 Flux Screening Quickling Bunker Top De-Dusting System (Sinter Plant)
- xv) S-29 ESP to New WHRSG of Kiln (DRP-2)
- xvi) S-34 Producer Hopper (DRP-2)
- xvii) S-35 Reheating Furnace (Blooming Mill)
- xviii) S-36 Bell Annealing Furnace - I
- xix) S-39 Reheating Furnace (PS-12)
- xx) S-40 MBF Stock House De-Dusting System

#### 3.2 Ambient Air Quality Monitoring Stations

- i) A-1 (Eklari Gate) : This station is located in North direction of the factory.
- ii) A-2 (Pump House-2 near Water Reservoir): This station is located in West direction of the factory.
- iii) A-3 (STP): This station is located in East- South direction of the factory.
- iv) A-4 (Guest House): This station is located in East direction of the factory.

#### 3.3 Fugitive Dust Monitoring Locations (any six)

- 1) F-1 (DRP-2) Near Kiln.
- 2) F-2 (Raw Material Handling Area) Near Stock Bin Area.
- 3) F-3 (Raw Material Feed Area) Feeder Area.
- 4) F-4 (Sinter Plant) in front of Proportionate Building.
- 5) F-5 (MBF) Near Blast Furnace.
- 6) F-6 (SMS) Beside of Continuous Casting Machine.

### **3.4 Effluent Sample Collection Points**

- 1) E-1 (DRP Drain Effluent).
- 2) E-2 (Waste Water Drain Effluent).
- 3) E-3 (Domestic Effluent).

### **3.5 Ambient Noise Levels Measurement Location**

- 1) N-1 (Eklari Gate)
- 2) N-2 (Pump House-2 near Water Reservoir)
- 3) N-3 (STP)
- 4) N-4 (Guest House)

## **4.5 Methodology and Procedures**

### **4.1 Stack Emission Monitoring & Analysis:-**

Sampling and analytical procedures followed for stack particulates and gaseous emissions are in accordance with EPA technique-5 using indigenous sampling train. The sampling ports in the test ducts are made available by the factory after making necessary arrangements as per requirements for safety of the monitoring persons. The stack sampling is carried out under normal working of the respective stack. Frequency of sampling is once in a week for each stack.

The stack sampling train is used for measurement of particulates and gaseous emissions. Isokinetic sampling is attained through Rotameter assembly to match the emission velocity on each traverse point for particulate sampling.

### **4.2 Ambient Air Quality Monitoring & Analysis:**

Irrespirable dust samplers are used for the monitoring & collections of ambient air quality samples. Three stations are monitored as per CPCB guidelines i.e. 24 hourly samples, twice in a week on two consecutive days. The methodology of sampler and details of parameters monitored & analyzed are given herewith.

#### **4.1.1 Particulate Matter ( $PM_{10}$ )**

Respirable Dust Samplers are installed at sampling stations selected on the basis of topography and wind pattern of the area.

Ambient air laden with dust gets sucked in the sampler through a chimney followed by hopper bottom cyclone. Due to creation of centrifugal force in the cyclone, particulates above 10 micron size fall under gravity through the hopper bottom into a closed pot. Particulates below 10 micron size are sucked further through top of cyclone to glass fiber filter paper mounted in further assembly of the instrument and are retained on it. Air devoid of particulates is exited out of the sampler. Outgoing air flow rate is monitored by a manometer.

Suspended particulates above 10 microns retained in the closed pot are termed as Non Respirable Particulate Matter (NRPM). Suspended particulates below 10 microns retained on the filter paper are termed as Respirable Particulate Matter (RPM). The addition of NRPM and RPM gives concentration of Suspended Particulate Matter (SPM).

By taking difference in initial & final weight of pot as well as filter paper, the actual weight of the suspended particulate can be calculated in ug. After dividing it by monitored volume of air in  $m^3$  the concentrations are expressed as  $ug/m^3$ .



#### **4.1.2 Sulphur dioxide as $SO_2$**

Method : Improved West and Gaeke.

Principle : Sulphur dioxide is absorbed from air in a solution of potassium tetrachloromercurate (TCM). A dichlorosulphitoromercurate complex which resists oxidation by the oxygen in the air is formed. This complex is stable to strong oxidants such as ozone and oxides of nitrogen and therefore the absorber solution may be stored for some time prior to analysis. The complex is made to react with pararosaniline and methylsulphonic acid. The absorbance of the solution is measured by means of a suitable spectrophotometer.

#### **4.1.3 Oxides of Nitrogen as $NO_2$**

Method : Modified Jacob and Hochheiser

Principle :  $NO_2$  is absorbed in sodium hydroxide-sodium arsenite solution to form a stable solution of sodium nitrite. This is further reacted with hydrogen peroxide, sulphanilamide with N-1 naphthylethylenediaminedihydrochloride to form an azo dye, the intensity of the solution is measured at 550 nm.

### **4.3 Fugitive Dust Monitoring & Analysis**

Respirable dust samplers are used for the monitoring & collections of fugitive dust samples. The samplers are placed at a distance of 3.0 m from the source of fugitive dust. The principle of the sampling and analysis is similar to given earlier for ambient air quality.

### **4.4 Effluent Collection & Analysis**

Treated effluent samples are collected from ETP provided in close loop of CCM, Rolling Mills and CPP as well as ETP provided for centralized pickling plant for the specified parameters as pH, Suspended Solids, Total Dissolved Solids, Iron, BOD (3 days  $27^\circ C$ ), COD, Oil & Grease, Chlorides and Sulphates. Treated effluent samples are analysed as per the procedure laid down in the "Standard Methods for the examination of Water & Waste Water". The parameter wise details are delineated below.

#### **4.4.1 pH**

Method : Electrometric Procedure

Principle : The pH is determined by measurement of the electromotive force of cell comprising an indicator electrode (an electrode responsive hydrogen ions such as glass electrode) immersed in the test solution and a reference electrode (usually a mercury calomel electrode) contact between the test solution and the reference electrode is usually achieved by means of a liquid junction, which forms a part of the reference electrode.

#### 4.4.2 Total Suspended Solids

- Method : By using Gravimetric Method (Filtration Method)
- Principle : Total suspended solids is measured by filtering a suitable aliquot of sample through a glass fibre (GF) filter paper washed with 100 ml of distilled water dried at 105°C, fitted in filtration assembly and weighed (WL) after applying suction. It is expressed in terms of mg/l.

#### 4.4.3 Total Dissolved Solids

- Method : By using Digital TDS Meter.
- Principle : Total dissolved solids of the sample are measured by using electronic TDS meter. It is expressed in terms of mg/l.

#### 4.4.4 Bio-Chemical Oxygen Demand

- Method : Bio-assay Procedure
- Principle : This test measures the oxygen utilised for the biochemical degradation of organic material and oxidation of inorganic material such as sulphides and ferrous ions during a specified incubation period. It also measures the oxygen used to oxidize reduced forms of nitrogen (nitrogenous demand) unless their oxidation is prevented by an inhibitor. Temperature effects are held constant by performing a test at fixed temperature. The methodology of BOD test is to compute a difference between initial and final DO of the samples incubation. DO is estimated by iodometric titration.

#### 4.4.5 Chemical Oxygen Demand

- Method : Standard potassium dichromate method with reflux apparatus
- Principle : Chemical Oxygen Demand (COD) test determines the oxygen required for the chemical oxidation of total organic matter with the help of strong chemical oxidant. In this test the total organic matter present in the sample gets oxidized completely by  $K_2Cr_2O_7$  in the presence of  $H_2SO_4$  to produce  $CO_2 + H_2O$ . The excess  $K_2Cr_2O_7$  remaining after the reaction is titrated with  $Fe(NH_4)_2(SO_4)_2$ . The dichromate consumed gives the  $O_2$  required for oxidation of the total organic matter & it is expressed in terms of mg/l.

#### 4.4.6 Oil & Grease

- Method : Solvent Extraction Method
- Principle : Oil, Grease and other extractable matters are dissolved in suitable solvent and separated from the aqueous phase. The solvent layer is then evaporated and the residue is weighed as oil and grease in terms of mg/l.

#### **4.4.7 Chloride**

Method	:	Titrimetric Method.
Principle	:	Chloride is determined in a sample by titration with standard silver nitrate solution, using potassium chromate as an indicator. Silver chloride is quantitatively precipitated before red silver chromate is formed & it is expressed in terms of mg/L

#### **4.4.8 Sulphate**

Method	:	Turbidimetric Method
Principle	:	Sulphate ion ( $\text{SO}_4$ ) is precipitated in an acetic acid medium with Barium Chloride ( $\text{BaCl}_2$ ) so as to form Barium Sulphate ( $\text{BaSO}_4$ ) crystals of uniform size. Light absorbance of the $\text{BaSO}_4$ suspension is measured by photometer or the scattering of light by Nephelometer.

#### **4.5 Ambient Noise Levels Measurement :**

Digital Sound Level Meter has been deployed for the purpose of measuring the noise levels. Noise levels are measured on hourly basis during day and night time. As per norms, day time is taken as 6.00 AM to 10.00 PM and night time is taken as 10.00 PM to 6.00 AM. The average values are reported.

#### **5.0 Results**

The results of monitoring and analysis of stack emission, ambient air quality, effluent quality, ambient noise levels and fugitive dust quality during the study period are presented herewith.





# EARTHCARE LABS PRIVATE LIMITED

Environmental Laboratory & Consultancy Organization

(NABL, OCS Accredited, ISO/IEC 17025:2017, ISO 9001, ISO 14001 & OHSAS 45001 Certified)

C-11, Amar Enclave Commercial Wing, Jog Layout, Prashant Nagar, Near Ajni Square, Nagpur - 440 015, Tel & Fax (0712) 2251470, Cell: 9766918882  
Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Effluent Quality

Format No.: ELPL/QD4/TRD/7.8/EI

Report No. : ELPL/09-24/11-A	Report Date : 14-09-2024
Name & Address of the Customer: <b>M/s. SUNFLAG IRON &amp; STEEL CO. LTD.</b> Village-Eklari (Warthi), Tal.- Mohadi, Dist.- Bhandara	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Waste Water (Effluent)	Sampling Location : DRP Nala
Sampling Ref Method : IS 3025 (Part 1): 1987 RA 2019	Environment Condition : Sunny (during sampling)
Sample Inward No. : ELPL/Sept-24/32/15/EI-11	
Sampling Date : 07-09-2024	Sampled By: ELPL Representative
Sample Receipt Date : 07-09-2024	
Period of Analysis : From 05-09-2024 to 14-09-2024	

## Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Pollution & Environment, Materials/Products Tested : Waste Water (Effluent)					
1.	pH value	—	5.5 to 8.5	7.24	IS 3025 (Part 11)
2.	Total Suspended Solids (TSS)	mg/l	100.0	28.0	IS 3025 (Part 17)
3.	Biochemical Oxygen Demand (BOD)	mg/l	100.0	3.10	IS 3025 (Part 44)
4.	Chemical Oxygen Demand (COD)	mg/l	250.0	84.0	IS 3025 (Part 58)
5.	Oil & Grease	mg/l	10.0	BDL (< 0.2)	IS 3025 (Part 39)
6.	Total Dissolved Solids	mg/l	2100.0	760.0	IS 3025 (Part 16)
7.	Chloride (as Cl)	mg/l	600.0	105.7	IS 3025 (Part 32)
8.	Sulphate (as SO <sub>4</sub> )	mg/l	1000.0	133.2	APHA 23 <sup>rd</sup> Ed - 4500 SO <sub>4</sub> <sup>2-</sup> (E)
9.	Iron (as Fe)	mg/l	5.0	BDL (< 0.05)	ELPL SOP No. BTM-7 based on 3025 (Part 2)

Note : 1. \*Indicates Consent No.: Format 1.0/CAC/UAN No. MPCB-CONSENT-0000163341/CR/2307000707 Dtd. 13-07-2023.

2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.



Verified & Authorized by

*Gadha*

(C.P. Jadhao)  
Quality Manager

\*\* End of the Report \*\*





# EARTHCARE LABS PRIVATE LIMITED

Environmental Laboratory & Consultancy Organization

(NABL, QCI Accredited, Maharashtra Recognized, ISO 9001, ISO 14001 & OHSAS 45001 Certified)

C-11, Amar Enclave Commercial Wing, Jog Layout, Prashant Nagar, Near Ajni Square, Nagpur - 440 015, Tel & Fax: (0712) 2251470, Cell: 9788616862  
Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Effluent Quality

Format No.: ELPL/ QD4/TRD/7.8/EI

Report No.: ELPL/09-24/12-A	Report Date: 14-09-2024
Name & Address of the Customer: M/s. SUNFLAG IRON & STEEL CO. LTD. Village - Eklari (Warhi), Tal.- Mohadi, Dist.- Bhandara	
Ref: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Waste Water (Effluent)	Sampling Location : Coal Washery
Sampling Ref Method : IS 3025 (Part 1): 1987 RA 2019	Environment Condition : Sunny (during sampling)
Sample Inward No. : ELPL/Sept-24/32/15/EL-12	
Sampling Date : 07-09-2024	Sampled By: ELPL Representative
Sample Receipt Date : 07-09-2024	
Period of Analysis : From 08-09-2024 to 14-09-2024	

## Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Pollution & Environment , Materials/ Products Tested : Waste Water (Effluent)					
1.	pH value	--	5.5 to 8.5	7.03	IS 3025 (Part 11)
2.	Total Suspended Solids (TSS)	mg/l	100.0	13.8	IS 3025 (Part 17)
3.	Biochemical Oxygen Demand (BOD)	mg/l	100.0	BOD (< 2.0)	IS 3025 (Part 44)
4.	Chemical Oxygen Demand (COD)	mg/l	250.0	76.0	IS 3025 (Part 58)
5.	Oil & Grease	mg/l	10.0	BOD (< 0.2)	IS 3025 (Part 39)
6.	Total Dissolved Solids	mg/l	2100.0	606.0	IS 3025 (Part 16)
7.	Chloride (as Cl)	mg/l	600.0	122.8	IS 3025 (Part 32)
8.	Sulphate (as SO <sub>4</sub> )	mg/l	1000.0	206.2	APHA 23 <sup>rd</sup> Ed - 4500 SO <sub>4</sub> <sup>2-</sup> (E)
9.	Iron (as Fe)	mg/l	5.0	0.25	ELPL SOP No. BTM-7 based on 3025 (Part 2)

Note : 1. \*Indicates Consent No.: Format I, D/CAC/UAN No. MPCB-CONSENT-0000163341/CR/2307000707 Dtd. 13-07-2023.  
2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.



Verified & Authorized by

*C.P. Jadhao*

(C.P. Jadhao)  
Quality Manager

\*\* End of the Report \*\*



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Environmental Laboratory & Consultancy Organization

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C-11, Amar Enclave Commercial Wing, Jog Layout, Prashant Nagar, Near Ajni Square, Nagpur - 440 015, Tel & Fax: (0712) 2251470, Cell: 9788616862  
Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Effluent Quality

Format No.: ELPL/QD4/TRD/7.B/EI

Report No. : ELPL/09-24/30-A	Report Date : 20-09-2024
Name & Address of the Customer: <b>M/s. SUNFLAG IRON &amp; STEEL CO. LTD.</b> Village - Eklari (Warthi), Tal. - Mohadi, Dist. - Bhandara	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Waste Water (Effluent)	Sampling Location : MBF ETP Outlet
Sampling Ref Method : IS 3025 (Part 1): 1987 RA 2019	Environment Condition : Sunny (during sampling)
Sample Inward No. : ELPL/Sept-24/32/40/EI-30	
Sampling Date : 14-09-2024	Sampled By : ELPL Representative
Sample Receipt Date : 14-09-2024	
Period of Analysis : From 15-09-2024 to 20-09-2024	

## Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Pollution & Environment, Materials/ Products Tested : Waste Water (Effluent)					
1.	pH value	--	5.5 to 8.5	7.32	IS 3025 (Part 11)
2.	Total Suspended Solids (TSS)	mg/l	100.0	28.4	IS 3025 (Part 17)
3.	Biochemical Oxygen Demand (BOD)	mg/l	100.0	6.68	IS 3025 (Part 44)
4.	Chemical Oxygen Demand (COD)	mg/l	250.0	140.0	IS 3025 (Part 58)
5.	Oil & Grease	mg/l	10.0	BDL (<0.2)	IS 3025(Part 39)
6.	Total Dissolved Solids	mg/l	2100.0	1408.0	IS 3025 (Part 16)
7.	Chloride (as Cl)	mg/l	600.0	332.2	IS 3025 (Part 32)
8.	Sulphate (as SO <sub>4</sub> )	mg/l	1000.0	80.0	APHA 23 <sup>rd</sup> Ed - 4500 SO <sub>4</sub> <sup>2-</sup> (E)
9.	Iron (as Fe)	mg/l	5.0	0.11	ELPL SOP No. BTM-7 based on 3025 (Part 2)

Note : 1. \*Indicates Consent No.: Format I.O/CAC/UAN No. MPCB-CONSENT-0000163341/CR/2307000707 Dtd. 13-07-2023.  
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Verified & Authorized by

*C.P. Jadhao*

(C.P. Jadhao)  
Quality Manager

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## Test Report Effluent Quality

Format No.: ELPL/QD4/TRD/7.8/EI

Report No. : ELPL/09-24/31-A	Report Date : 20-09-2024
Name & Address of the Customer: <b>M/s. SUNFLAG IRON &amp; STEEL CO. LTD.</b> Village - Eklari (Warthi), Tal.- Mohadi, Dist.- Bhandara	
Ref.: Your Purchase Order No. 4500002279 Dtd. 09-09-2023.	
Sample Type : Waste Water (Effluent)	Sampling Location : Waste Water Tank
Sampling Ref Method : IS 3025 (Part 1): 1987 RA 2019	Environment Condition : Sunny (during sampling)
Sample Inward No. : ELPL/Sept-24/32/40/EI-31	
Sampling Date : 14-09-2024	Sampled By: ELPL Representative
Sample Receipt Date : 14-09-2024	
Period of Analysis : From 15-09-2024 to 20-09-2024	

## Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
<b>Discipline : Chemical, Group : Pollution &amp; Environment, Materials/Products Tested : Waste Water (Effluent)</b>					
1.	pH value	--	5.5 to 8.5	7.83	IS 3025 (Part 11)
2.	Total Suspended Solids (TSS)	mg/l	100.0	9.60	IS 3025 (Part 17)
3.	Biochemical Oxygen Demand (BOD)	mg/l	100.0	3.35	IS 3025 (Part 44)
4.	Chemical Oxygen Demand (COD)	mg/l	250.0	64.0	IS 3025 (Part 58)
5.	Oil & Grease	mg/l	10.0	BDL (< 0.2)	IS 3025(Part 39)
6.	Total Dissolved Solids	mg/l	2100.0	196.0	IS 3025 (Part 16)
7.	Chloride (as Cl)	mg/l	600.0	32.2	IS 3025 (Part 32)
8.	Sulphate (as SO <sub>4</sub> )	mg/l	1000.0	28.9	APHA 23 <sup>rd</sup> Ed - 4500 SO <sub>4</sub> <sup>2-</sup> (E)
9.	Iron (as Fe)	mg/l	5.0	BDL (< 0.05)	ELPL SOP No. BTM-7 based on 3025 (Part 2)

Note : 1. \*Indicates Consent No.: Format 1.0/CAC/UAN No. MPCB-CONSENT-0000163341/CR/2307000707 Dtd: 13-07-2023.  
2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.



Verified & Authorized by

*C.P. Jadhao*

(C.P. Jadhao)  
Quality Manager

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Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Effluent Quality

Format No.: ELPL/QD4/TRD/7.8/EI

Report No. : ELPL/09-24/46-A	Report Date : 05-10-2024
Name & Address of the Customer: <b>M/s. SUNFLAG IRON &amp; STEEL CO. LTD.</b> Village - Eklari (Warthi), Tal.- Mohadi, Dist.- Bhandara	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Waste Water (Effluent) Sampling Ref Method : IS 3025 (Part 1): 1987 RA 2019 Sample Inward No. : ELPL/Sept-24/32/74/EI-46	Sampling Location : Main ETP Outlet (Utility) Environment Condition : Sunny (during sampling)
Sampling Date : 28-09-2024 Sample Receipt Date : 28-09-2024	Sampled By: ELPL Representative
Period of Analysis : From 30-09-2024 to 05-10-2024	

## Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
<b>Discipline : Chemical, Group : Pollution &amp; Environment, Materials/Products Tested : Waste Water (Effluent)</b>					
1.	pH value	-	5.5 to 8.5	7.21	IS 3025 (Part 11)
2.	Total Suspended Solids (TSS)	mg/l	100.0	12.4	IS 3025 (Part 17)
3.	Biochemical Oxygen Demand (BOD)	mg/l	100.0	9.10	IS 3025 (Part 44)
4.	Chemical Oxygen Demand (COD)	mg/l	250.0	96.0	IS 3025 (Part 58)
5.	Oil & Grease	mg/l	10.0	BDL (< 0.2)	IS 3025(Part 39)
6.	Total Dissolved Solids	mg/l	2100.0	286.0	IS 3025 (Part 16)
7.	Chloride (as Cl)	mg/l	600.0	35.5	IS 3025 (Part 32)
8.	Sulphate (as SO <sub>4</sub> )	mg/l	1000.0	52.7	APHA 23 <sup>rd</sup> Ed - 4500 SO <sub>4</sub> <sup>2-</sup> (E)
9.	Iron (as Fe)	mg/l	5.0	BDL (< 0.05)	ELPL SOP No. BTM-7 based on 3025 (Part 2)

Note : 1. \*indicates Consent No.: Format I.O/CAC/UAN No. MPCB-CONSENT-0000163341/CR/2307000707 Dtd. 13-07-2023.  
2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.



Verified & Authorized by

*Gadha*

(C.P. Jadhao)  
Quality Manager

\*\* End of the Report \*\*





TC-12331

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**Test Report  
Effluent Quality**

Formal No.: ELPL/QD4/TRD/7.8/EI

Report No. : ELPL/09-24/47-A	Report Date : 05-10-2024
Name & Address of the Customer: <b>M/s. SUNFLAG IRON &amp; STEEL CO. LTD.</b> Village - Eklari (Warthi), Tal.- Mohadi, Dist.- Bhandara	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Waste Water (Effluent)	Sampling Location : Pickling ETP Outlet
Sampling Ref Method : IS 3025 (Part 1): 1987 RA 2019	Environment Condition: Sunny (during sampling)
Sample Inward No. : ELPL/Sept-24/32/74/EI-47	
Sampling Date : 28-09-2024	Sampled By: ELPL Representative
Sample Receipt Date : 28-09-2024	
Period of Analysis : From 30-09-2024 to 05-10-2024	

**Results of Analysis**

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
<b>Discipline : Chemical, Group : Pollution &amp; Environment, Materials/Products Tested : Waste Water (Effluent)</b>					
1.	pH value	--	5.5 to 9.0	7.72	IS 3025 (Part 11)
2.	Total Suspended Solids (TSS)	mg/l	100.0	26.4	IS 3025 (Part 17)
3.	Biochemical Oxygen Demand (BOD)	mg/l	100.0	3.10	IS 3025 (Part 44)
4.	Chemical Oxygen Demand (COD)	mg/l	250.0	240.0	IS 3025 (Part 58)
5.	Oil & Grease	mg/l	10.0	BDL (<0.2)	IS 3025(Part 39)
6.	Total Dissolved Solids	mg/l	2100.0	2018.0	IS 3025 (Part 16)
7.	Chloride (as Cl)	mg/l	600.0	589.8	IS 3025 (Part 32)
8.	Sulphate (as SO <sub>4</sub> )	mg/l	1000.0	723	APHA 23 <sup>rd</sup> Ed - 4500 SO <sub>4</sub> <sup>2-</sup> (E)
9.	Iron (as Fe)	mg/l	3.0	BDL (<0.05)	ELPL SOP No. BTM-7 based on 3025 (Part 2)

Note : 1. \*indicates Consent No.: Format 1.0/CA/UAN No. MPCB-CONSENT-0000163341/CR/2307000707 Dtd. 13-07-2023.  
2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or Fully Without prior approval of ELPL.



Verified &amp; Authorized by

*C.P. Jadhao*(C.P. Jadhao)  
Quality Manager

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## Test Report Effluent Quality

Format No.: ELPL/ QD4/TRD/7.8/ED

Report No. : ELPL/09-24/25-A	Report Date : 30-09-2024
Name & Address of the Customer: <b>M/s. SUNFLAG IRON &amp; STEEL CO. LTD.</b> Village - Eklari (Warhi), Tal.- Mohadi, Dist.- Bhandara	
Ref.: Your Purchase Order No. 4600062279 Dtd. 09-09-2023.	
Sample Type : Waste Water (Sewage)	Sampling Location : STP Outlet
Sampling Ref Method : IS 3025 (Part 1): 1987 RA 2019	Environment Condition: Sunny (during sampling)
Sample Inward No. : ELPL/Sept-24/32/62/ED-25	
Sampling Date : 21-09-2024	Sampled By: ELPL Representative
Sample Receipt Date : 21-09-2024	
Period of Analysis : From 23-09-2024 to 30-09-2024	

## Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Pollution & Environment, Materials/ Products Tested : Waste Water (Sewage)					
1.	Total Suspended Solids (TSS)	mg/l	50.0	11.2	IS 3025 (Part 17)
2.	Biochemical Oxygen Demand (BOD)	mg/l	30.0	22.7	IS 3025 (Part 44)
3.	Chemical Oxygen Demand (COD)	mg/l	100.0	79.9	IS 3025 (Part 58)
Note : 1. *Indicates Consent No.: Format I.B/CACUAN No. MPCB-CONSENT-0000163341/CR/2307000707 Dtd. 13-07-2023. 2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.					
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## Test Report Ambient Air Quality

Format No.: ELPL/QD-VTRD/7.8/AA

Report No : ELPL/09-24/40-A	Report Date : 11-09-2024
Name & Address of the Customer: <b>M/s. SUNFLAG IRON &amp; STEEL CO. LTD.</b> Village - Eldari (Wardhi), Tal.-Mohadi, Dist.- Bhandara	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Ambient Air	Sampling Location : A-1 (Eldari Gate)
Sampling Ref Method : As Per Test Method	Environment Condition : Sunny (during sampling)
Sample Inward No. : ELPL/Sept-24/32/17/AA-40	
Sampling Date : From 02-09-2024 to 03-09-2024	Sampled by : ELPL Representative
Sample Receipt Date : 08-09-2024	
Avg. Ambient Temp : 26.6 °C	Prominent Wind Direction : E
Avg. Relative Humidity : 90.5 %	Average Wind Speed : 4.04 km/hr
Period of Analysis : From 08-09-2024 to 11-09-2024	

### Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/Products Tested : Ambient Air					
1.	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	80	9.10	IS 5182 (Part 2)
2.	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	80	14.3	IS 5182 (Part 6)
3.	Particulate Matter size less than 10 µm (PM <sub>10</sub> )	µg/m <sup>3</sup>	100	62.4	IS 5182 (Part 23)
4.	Particulate Matter size less than 2.5 µm (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	60	28.6	IS : 5182 (Part 24)

Note : 1. \* indicates NAAQS (Govt. of India MoEF Notification No. GSR 826 CE dtd.16-11-2009 as amended).  
2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.



Verified & Authorized by

*C.P. Jadhao*

(C.P. Jadhao)  
Quality Manager

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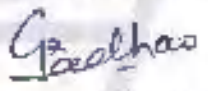
## Test Report

### Ambient Air Quality

Format No.: ELPL/QD4/TRD/7.8/AA

Report No : ELPL/09-24/44-A	Report Date : 11-09-2024
Name & Address of the Customer: <b>M/s. SUNFLAG IRON &amp; STEEL CO. LTD.</b> Village - Eklari (Warhi), Tal.- Mohadi, Dist.- Bhandara	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Ambient Air	Sampling Location : A-1 (Eklari Gate)
Sampling Ref Method : As Per Test Method	Environment Condition: Sunny (during sampling)
Sample Inward No. : ELPL/Sept-24/32/17/AA-44	
Sampling Date : From 06-09-2024 to 07-09-2024	Sampled by : ELPL Representative
Sample Receipt Date : 08-09-2024	
Avg. Ambient Temp : 27.8 °C	Prominent Wind Direction : ENE
Avg. Relative Humidity : 91.0 %	Average Wind Speed : 3.83 km/hr
Period of Analysis : From 08-09-2024 to 11-09-2024	

### Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/Products Tested : Ambient Air					
1.	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	80	8.54	IS 5182 (Part 2)
2.	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	80	12.9	IS 5182 (Part 6)
3.	Particulate Matter size less than 10 µm (PM <sub>10</sub> )	µg/m <sup>3</sup>	100	60.5	IS 5182 (Part 23)
4.	Particulate Matter size less than 2.5 µm (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	60	26.7	IS : 5182 (Part 24)
Note : 1. * Indicates NAAQS (Govt. of India MoEF Notification No. GSR 326 CE dtd.16-11-2009 as amended). 2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.					
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Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com


## Test Report

Format No.: ELPL/QD4/TRD/7.8/AA

### Ambient Air Quality

Report No : ELPL/09-24/120-A	Report Date : 19-09-2024
Name & Address of the Customer: <b>M/s. SUNFLAG IRON &amp; STEEL CO. LTD.</b> Village - Eklari (Wantha), Tal. - Mohadi, Dist. - Bhandara	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Ambient Air Sampling Ref Method : As Per Test Method Sample Inward No. : ELPL/Sept-24/32/49/AA-120	Sampling Location : A-1 (Eklari Gate) Environment Condition: Sunny (during sampling)
Sampling Date : From 09-09-2024 to 10-09-2024 Sample Receipt Date : 15-09-2024	Sampled by : ELPL Representative
Avg. Ambient Temp : 25.5 °C Avg. Relative Humidity : 91.2 %	Prominent Wind Direction : W Average Wind Speed : 3.66 km/hr
Period of Analysis : From 15-09-2024 to 19-09-2024	

### Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/Products Tested : Ambient Air					
1.	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	80	7.06	IS 5182 (Part 2)
2.	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	80	10.9	IS 5182 (Part 6)
3.	Particulate Matter size less than 10 µm (PM <sub>10</sub> )	µg/m <sup>3</sup>	100	64.3	IS 5182 (Part 23)
4.	Particulate Matter size less than 2.5 µm (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	50	30.4	IS : 5182 (Part 24)
Note : 1. * indicates NAAQS (Govt. of India MoEF Notification No. GSR 826 CE dtd.16-11-2009 as amended). 2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.					
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## Test Report Ambient Air Quality

Format No.: ELPL/QD4/TRD/7.8/AA

Report No : ELPL/09-24/124-A	Report Date : 19-09-2024
Name & Address of the Customer: <b>M/s. SUNFLAG IRON &amp; STEEL CO. LTD.</b> Village - Eklari (Warhi), Tal. - Mohadi, Dist. - Bhandara	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Ambient Air	Sampling Location : A-1 (Eklari Gate)
Sampling Ref Method : As Per Test Method	Environment Condition : Sunny (during sampling)
Sample Inward No. : ELPL/Sept-24/32/49/AA-124	
Sampling Date : From 13-09-2024 to 14-09-2024	Sampled by : LPL Representative
Sample Receipt Date : 15-09-2024	
Avg. Ambient Temp : 25.8 °C	Prominent Wind Direction : SW
Avg. Relative Humidity : 91.2 %	Average Wind Speed : 3.5 km/hr
Period of Analysis : From 15-09-2024 to 19-09-2024	

## Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/Products Tested : Ambient Air					
1.	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	80	5.07	IS 5182 (Part 2)
2.	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	80	13.4	IS 5182 (Part 6)
3.	Particulate Matter size less than 10 µm (PM <sub>10</sub> )	µg/m <sup>3</sup>	100	61.4	IS 5182 (Part 23)
4.	Particulate Matter size less than 2.5 µm (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	60	27.7	IS : 5182 (Part 24)

Note : 1. \* Indicates NAAQS (Govt. of India MoEF Notification No. GSR 836 CE dtd.16-11-2009 as amended).  
2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.



Verified & Authorized by

*C.P. Jadhao*

(C.P. Jadhao)  
Quality Manager

\*\* End of the Report \*\*





# EARTHCARE LABS PRIVATE LIMITED

Environmental Laboratory & Consultancy Organization

(BURL, OHS Assessed, ISO/IEC 17025:2005, ISO 9001:2015 & ISO 14001:2015 Certified)

C-11, Amar Enclave Commercial Wing, Jog Layout, Prashant Nagar, Near Ajni Square, Nagpur - 440 016, Tel & Fax: (0712) 2251470, Cell: 9786616862

Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report

### Ambient Air Quality

Form No.: ELPL/ QD4/TRD/7.8/AA

Report No : ELPL/09-24/224-A	Report Date : 28-09-2024
Name & Address of the Customer: <b>M/s. SUNFLAG IRON &amp; STEEL CO. LTD.</b> Village - Eklari (Warhi), Tal.- Mohadi, Dist.- Bhandara	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Ambient Air	Sampling Location : A-1 (Eklari Gate)
Sampling Ref Method : As Per Test Method	Environment Condition: Sunny (during sampling)
Sample Inward No. : ELPL/Sept-24/32/64/AA-224	
Sampling Date : From 16-09-2024 to 17-09-2024	Sampled by : ELPL Representative
Sample Receipt Date : 25-09-2024	
Avg. Ambient Temp : 28.3 °C	Prominent Wind Direction : NNW
Avg. Relative Humidity : 66.8 %	Average Wind Speed : 5.75 km/hr
Period of Analysis : From 25-09-2024 to 28-09-2024	

### Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/ Products Tested : Ambient Air					
1.	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	80	7.71	IS 5182 (Part 2)
2.	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	80	11.4	IS 5182 (Part 6)
3.	Particulate Matter size less than 10 µm (PM <sub>10</sub> )	µg/m <sup>3</sup>	100	63.2	IS 5182 (Part 23)
4.	Particulate Matter size less than 2.5 µm (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	60	28.6	IS : 5182 (Part 24)

Note : 1. \* indicates NAAQS (Govt. of India MoEF Notification No. GSR 826 CE dtd.16-11-2009 as amended).

2. Test results relates to sample collected & tested only for the selected parameters . It shall not be reproduced partially or fully Without prior approval of ELPL.



Verified & Authorized by

*Gadha*

(C.P. Jadhao)  
Quality Manager

• • End of the Report • •



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Environmental Laboratory & Consultancy Organization

(NABL OCE Accredited, MoEPCC Recognized, ISO 9001, ISO 14001 & OHSAS 45001 Certified)

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Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com


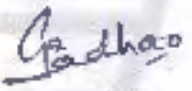
## Test Report

Format No.: ELPL/QD4/TRD/7.8/AA

### Ambient Air Quality

Report No : ELPL/09-24/228-A	Report Date : 28-09-2024
Name & Address of the Customer: <b>M/s. SUNFLAG IRON &amp; STEEL CO. LTD.</b> Village - Eklari (Warthi), Tal.- Mohadi, Dist.- Bhandara	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Ambient Air Sampling Ref Method : As Per Test Method Sample Inward No. : ELPL/Sept-24/32/64/AA-228	Sampling Location : A-1 (Eklari Gate) Environment Condition: Sunny (during sampling)
Sampling Date : From 20-09-2024 to 21-09-2024 Sample Receipt Date : 25-09-2024	Sampled by : ELPL Representative
Avg. Ambient Temp : 26.6 °C Avg. Relative Humidity : 65.8 %	Prominent Wind Direction : NW Average Wind Speed : 6.83 km/hr
Period of Analysis : From 25-09-2024 to 28-09-2024	

### Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/ Products Tested : Ambient Air					
1.	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	80	8.97	IS 5182 (Part 2)
2.	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	80	14.4	IS 5182 (Part 6)
3.	Particulate Matter size less than 10 µm (PM <sub>10</sub> )	µg/m <sup>3</sup>	100	65.2	IS 5182 (Part 23)
4.	Particulate Matter size less than 2.5 µm (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	60	31.4	IS : 5182 (Part 24)
Note : 1. * Indicates NAAQS (Govt. of India MoEF Notification No. GSR 826/CE dtd.16-11-2009 as amended). 2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.					
					Verified & Authorized by  (C.P. Jadhao) Quality Manager

\*\* End of the Report \*\*





TC-12331

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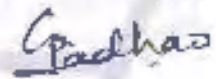
ISO 9001:2015 Accredited, ISO 14001:2015 Registered, ISO 45001:2018 Registered &amp; OHSAS 18001:2007 Certified

C-11, Amar Enclave Commercial Wing, Jog Layout, Prashant Nagar, Near Ajni Square, Nagpur - 440 015, Tel & Fax: (0712) 2251470, Cell: 9766616662  
Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com**Test Report  
Ambient Air Quality**

Form No.: ELPL/QD4/TRD/7.8/AA

Report No : ELPL/09-24/272-A	Report Date : 03-10-2024
Name & Address of the Customer: <b>M/s. SUNFLAG IRON &amp; STEEL CO. LTD.</b> Village - Eklari (Warhi), Tal- Mohadi, Dist.- Bhandara	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Ambient Air	Sampling Location : A-1 (Eklari Gate)
Sampling Ref Method : As Per Test Method	Environment Condition : Sunny (during sampling)
Sample Inward No. : ELPL/Sept-24/32/76/AA-272	
Sampling Date : From 23-09-2024 to 24-09-2024	Sampled by : ELPL Representative
Sample Receipt Date : 28-09-2024	
Avg. Ambient Temp : 28.2 °C	Prominent Wind Direction : SE
Avg. Relative Humidity : 85.9 %	Average Wind Speed : 2.79 km/hr
Period of Analysis : From 30-09-2024 to 03-10-2024	

**Results of Analysis**

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/ Products Tested : Ambient Air					
1.	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	80	8.43	IS 5182 (Part 2)
2.	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	80	14.7	IS 5182 (Part 6)
3.	Particulate Matter size less than 10 µm (PM <sub>10</sub> )	µg/m <sup>3</sup>	100	63.2	IS 5182 (Part 23)
4.	Particulate Matter size less than 2.5 µm (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	60	29.4	IS : 5182 (Part 24)
Note : 1. * indicates NAAQS (Govt. of India MoEF Notification No. GSR 826 CE dtd.16-11-2009 as amended). 2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.					
					Verified & Authorized by  (C.P. Jadhao) Quality Manager

\*\* End of the Report \*\*



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Environmental Laboratory & Consultancy Organization

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C-11, Amar Enclave Commercial Wing, Jog Layout, Prashant Nagar, Near Ajni Square, Nagpur - 440 016, Tel & Fax: (0712) 2251470, Cell: 9766816862

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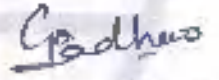
## Test Report

Format No.: ELPL/QD4/TRD/7.8/AA

### Ambient Air Quality

Report No : ELPL/09-24/276-A	Report Date : 03-10-2024
Name & Address of the Customer: <b>M/s. SUNFLAG IRON &amp; STEEL CO. LTD.</b> Village - Eklari (Warhi), Tal.- Mohadi, Dist.- Bhandara	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Ambient Air Sampling Ref Method : As Per Test Method Sample Inward No. : ELPL/Sept-24/3276/AA-276	Sampling Location : A-1 (Eklari Gate) Environment Condition: Sunny (during sampling)
Sampling Date : From 27-09-2024 to 28-09-2024 Sample Receipt Date : 28-09-2024	Sampled by : ELPL Representative
Avg. Ambient Temp : 27.5 °C Avg. Relative Humidity : 88.2 %	Prominent Wind Direction : NW Average Wind Speed : 3.58 km/hr
Period of Analysis : From 30-09-2024 to 03-10-2024	

### Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/ Products Tested : Ambient Air					
1.	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	80	7.17	IS 5182 (Part 2)
2.	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	80	13.2	IS 5182 (Part 6)
3.	Particulate Matter size less than 10 µm (PM <sub>10</sub> )	µg/m <sup>3</sup>	100	59.4	IS 5182 (Part 23)
4.	Particulate Matter size less than 2.5 µm (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	60	27.8	IS : 5182 (Part 24)
Note : 1. * Indicates NAAQS (Govt. of India MoEF Notification No. GSR 326 CE dtd. 16-11-2009 as amended). 2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.					
					Verified & Authorized by  (C.P. Jadhav) Quality Manager



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## Test Report Ambient Air Quality

Format No.: ELPL/QD4/TRD/7.8/AA

Report No : ELPL/09-24/41-A	Report Date : 11-09-2024
Name & Address of the Customer: <b>M/s. SUNFLAG IRON &amp; STEEL CO. LTD.</b> Village - Eklari (Warhi), Tal - Mohadi, Dist - Bhandara	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Ambient Air Sampling Ref Method : As Per Test Method Sample Inward No. : ELPL/Sept-24/32/17/AA-41	Sampling Location : A-2 (Pump House-2 near Water Reservoir) Environment Condition: Sunny (during sampling)
Sampling Date : From 02-09-2024 to 03-09-2024 Sample Receipt Date : 08-09-2024	Sampled by : ELPL Representative
Avg. Ambient Temp : 26.6 °C Avg. Relative Humidity : 90.5 %	Prominent Wind Direction : E Average Wind Speed : 4.04 km/hr
Period of Analysis : From 08-09-2024 to 11-09-2024	

### Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/Products Tested : Ambient Air					
1.	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	80	9.31	IS 5182 (Part 2)
2.	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	80	15.7	IS 5182 (Part 6)
3.	Particulate Matter size less than 10 µm (PM <sub>10</sub> )	µg/m <sup>3</sup>	100	64.9	IS 5182 (Part 23)
4.	Particulate Matter size less than 2.5 µm (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	60	31.2	IS : 5182 (Part 24)

Note : 1. \* indicates NAAQS (Govt. of India MoEF Notification No. GSR 826 CE dtd.16-11-2009 as amended).  
2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.



Verified & Authorized by

*C.P. Jadhao*

(C.P. Jadhao)  
Quality Manager

\*\* End of the Report \*\*



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Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com


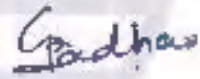
## Test Report

### Ambient Air Quality

Format No.: ELPL/QD4/TRD/7.8/AA

Report No : ELPL/09-24/45-A	Report Date : 11-09-2024
Name & Address of the Customer: <b>M/s. SUNFLAG IRON &amp; STEEL CO. LTD.</b> Village - Ekari (Warhi), Tal.- Mohadi, Dist.- Bhandara	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Ambient Air Sampling Ref Method : As Per Test Method Sample Inward No. : ELPL/Sept-24/32/17/AA-45	Sampling Location : A-2 (Pump House-2 near Water Reservoir) Environment Condition: Sunny (during sampling)
Sampling Date : From 06-09-2024 to 07-09-2024 Sample Receipt Date : 08-09-2024	Sampled by : ELPL Representative
Avg. Ambient Temp : 27.8 °C Avg. Relative Humidity : 91.0 %	Prominent Wind Direction : ENE Average Wind Speed : 3.83 km/hr
Period of Analysis : From 08-09-2024 to 11-09-2024	

### Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/Products Tested : Ambient Air					
1.	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	80	7.50	IS 5182 (Part 2)
2.	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	80	13.3	IS 5182 (Part 6)
3.	Particulate Matter size less than 10 µm (PM <sub>10</sub> )	µg/m <sup>3</sup>	100	61.7	IS 5182 (Part 23)
4.	Particulate Matter size less than 2.5 µm (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	60	27.4	IS : 5182 (Part 24)
Note : 1. * indicates NAAQS (Govt. of India MoEF Notification No. GSR 826 CE dtd.16-11-2009 as amended). 2. Test results relates to sample collected & tested only for the selected parameters . It shall not be reproduced partially or fully Without prior approval of ELPL.					
					Verified & Authorized by  (C.P. Jadhao) Quality Manager

\*\* End of the Report \*\*





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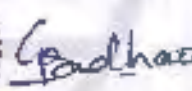
C-11, Amar Enclave Commercial Wing, Jog Layout, Prashant Nagar, Near Ajni Square, Nagpur - 440 016, Tel & Fax: (0712) 2251470, Cell: 9786618862  
Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Ambient Air Quality

Format No.: ELPL/QM/TRD/7.8/AA

Report No.: ELPL/09-24/121-A	Report Date: 19-09-2024
Name & Address of the Customer: <b>M/s. SUNFLAG IRON &amp; STEEL CO. LTD.</b> Village - Ekari (Warhi), Tal.- Mohadi, Dist.- Bhandara	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Ambient Air Sampling Ref Method : As Per Test Method Sample Inward No. : ELPL/Sept-24/32/49/AA-121	Sampling Location : A-2 (Pump House-2 near Water Reservoir) Environment Condition: Sunny (during sampling)
Sampling Date : From 09-09-2024 to 10-09-2024 Sample Receipt Date : 15-09-2024	Sampled by : ELPL Representative
Avg. Ambient Temp : 25.5 °C Avg. Relative Humidity : 91.2 %	Prominent Wind Direction : W Average Wind Speed : 3.66 km/hr
Period of Analysis : From 15-09-2024 to 19-09-2024	

### Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/ Products Tested : Ambient Air					
1.	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	80	7.20	IS 5182 (Part 2)
2.	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	80	11.6	IS 5182 (Part 6)
3.	Particulate Matter size less than 10 µm (PM <sub>10</sub> )	µg/m <sup>3</sup>	100	66.3	IS 5182 (Part 23)
4.	Particulate Matter size less than 2.5 µm (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	60	32.1	IS : 5182 (Part 24)
Note : 1. * Indicates NAAQS (Govt. of India MoEF Notification No. GSR 826 CE dtd.16-11-2009 as amended). 2. Test results relates to sample collected & tested only for the selected parameters . It shall not be reproduced partially or fully Without prior approval of ELPL.					
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\*\* End of the Report \*\*



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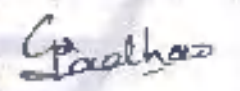
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Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Ambient Air Quality

Formal No.: ELPL/QD4/TRD/7.8/AA

Report No : ELPL/09-24/125-A	Report Date : 19-09-2024
Name & Address of the Customer: <b>M/L SUNFLAG IRON &amp; STEEL CO. LTD.</b> Village - Eklari (Warhi), Tal.- Mohadi, Dist.- Bhandara	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Ambient Air Sampling Ref Method : As Per Test Method Sample Inward No. : ELPL/Sept-24/32/49/AA-125	Sampling Location : A-2 (Pump House-2 near Water Reservoir) Environment Condition: Sunny (during sampling)
Sampling Date : From 13-09-2024 to 14-09-2024 Sample Receipt Date : 15-09-2024	Sampled by : LPL Representative
Avg. Ambient Temp : 25.8 °C Avg. Relative Humidity : 91.2 %	Prominent Wind Direction : SW Average Wind Speed : 3.5 km/hr
Period of Analysis : From 15-09-2024 to 19-09-2024	

### Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/Products Tested : Ambient Air					
1.	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	80	8.88	IS 5182 (Part 2)
2.	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	80	12.3	IS 5182 (Part 6)
3.	Particulate Matter size less than 10 µm (PM <sub>10</sub> )	µg/m <sup>3</sup>	100	64.6	IS 5182 (Part 23)
4.	Particulate Matter size less than 2.5 µm (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	60	30.4	IS : 5182 (Part 24)
Note : 1. * indicates NAAQS (Govt. of India MoEF Notification No. GSR 826 CE dtd.16-11-2009 as amended). 2. Test results relates to sample collected & tested only for the selected parameters . It shall not be reproduced partially or fully Without prior approval of ELPL.					
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\*\* End of the Report \*\*





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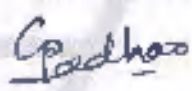
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Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Ambient Air Quality

Form No.: ELPL/QD4/TRD/7.8/AA

Report No : ELPL/09-24/225-A		Report Date : 28-09-2024	
Name & Address of the Customer: <b>M/s. SUNFLAG IRON &amp; STEEL CO. LTD.</b> Village - Eklari (Wardhi), Tal.- Mohadi, Dist.- Bhandara			
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.			
Sample Type : Ambient Air		Sampling Location : A-2 (Pump House-2 near Water Reservoir)	
Sampling Ref Method : As Per Test Method		Environment Condition : Sunny (during sampling)	
Sample Inward No. : ELPL/Sept-24/32/64/AA-225			
Sampling Date : From 16-09-2024 to 17-09-2024		Sampled by : ELPL Representative	
Sample Receipt Date : 25-09-2024			
Avg. Ambient Temp : 28.3 °C		Prominent Wind Direction : NNW	
Avg. Relative Humidity : 66.8 %		Average Wind Speed : 5.75 km/hr	
Period of Analysis : From 25-09-2024 to 28-09-2024			

### Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/ Products Tested : Ambient Air					
1.	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	80	7.01	IS 5182 (Part 2)
2.	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	80	12.3	IS 5182 (Part 6)
3.	Particulate Matter size less than 10 µm (PM <sub>10</sub> )	µg/m <sup>3</sup>	100	62.4	IS 5182 (Part 23)
4.	Particulate Matter size less than 2.5 µm (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	60	29.1	IS : 5182 (Part 24)
Note : 1. * indicates NAAQS (Govt. of India MoEF Notification No. GSR 826 CE dtd.16-11-2009 as amended). 2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.					
				Verified & Authorized by  (C.P. Jadhao) Quality Manager	

\*\* End of the Report \*\*



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Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Ambient Air Quality

Format No.: ELPL/ QD4/TRD/7.3/AA

Report No : ELPL/09-24/229-A	Report Date : 28-09-2024
Name & Address of the Customer: <b>M/s. SUNFLAG IRON &amp; STEEL CO. LTD.</b> Village - Eklari (Warhi), Tal.- Mohadi, Dist.- Bhandara	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Ambient Air Sampling Ref Method : As Per Test Method Sample Inward No. : ELPL/Sept-24/32/64/AA-229	Sampling Location : A-2 (Pump House-2 near Water Reservoir) Environment Condition: Sunny (during sampling)
Sampling Date : From 20-09-2024 to 21-09-2024 Sample Receipt Date : 25-09-2024	Sampled by : ELPL Representative
Avg. Ambient Temp : 26.6 °C Avg. Relative Humidity : 65.8 %	Prominent Wind Direction : NW Average Wind Speed : 6.83 km/hr
Period of Analysis : From 25-09-2024 to 28-09-2024	

### Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/ Products Tested : Ambient Air					
1.	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	80	8.62	IS 5182 (Part 2)
2.	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	80	14.1	IS 5182 (Part 6)
3.	Particulate Matter size less than 10 µm (PM <sub>10</sub> )	µg/m <sup>3</sup>	100	61.2	IS 5182 (Part 23)
4.	Particulate Matter size less than 2.5 µm (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	60	28.5	IS : 5182 (Part 24)

Note : 1. \* indicates NAAQS (Govt. of India MoEF Notification No. GSR 826 CE dtd. 16-11-2009 as amended).  
2. Test results relates to sample collected & tested only for the selected parameters . It shall not be reproduced partially or fully Without prior approval of ELPL.



Verified & Authorized by

*C.P. Jadhao*

(C.P. Jadhao)  
Quality Manager

\*\* End of the Report \*\*





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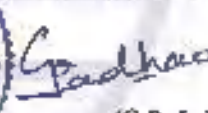
C-11, Amer Enclave Commercial Wing, Jog Layout, Prashant Nagar, Near Ajni Square, Nagpur - 440 016, Tel & Fax: (0712) 2251470, Cell: 9788816882  
Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Ambient Air Quality

Format No.: ELPL/QD4/TRD/7.8/AA

Report No : ELPL/09-24/273-A	Report Date : 03-10-2024
Name & Address of the Customer: <b>M/s. SUNFLAG IRON &amp; STEEL CO. LTD.</b> Village - Eklari (Warhi), Tal.- Mohadi, Dist.- Bhandara	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Ambient Air Sampling Ref Method : As Per Test Method Sample Inward No. : ELPL/Sept-24/32/76/AA-273	Sampling Location : A-2 (Pump House-2 near Water Reservoir) Environment Condition: Sunny (during sampling)
Sampling Date : From 23-09-2024 to 24-09-2024 Sample Receipt Date : 28-09-2024	Sampled by : ELPL Representative
Avg. Ambient Temp : 28.2 °C Avg. Relative Humidity : 85.9 %	Prominent Wind Direction : SE Average Wind Speed : 2.79 km/hr
Period of Analysis : From 30-09-2024 to 03-10-2024	

### Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/ Products Tested : Ambient Air					
1.	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	80	8.54	IS 5182 (Part 2)
2.	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	80	13.4	IS 5182 (Part 6)
3.	Particulate Matter size less than 10 µm (PM <sub>10</sub> )	µg/m <sup>3</sup>	100	62.8	IS 5182 (Part 23)
4.	Particulate Matter size less than 2.5 µm (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	60	28.3	IS : 5182 (Part 24)
Note : 1. * indicates NAAQS (Govt. of India MoEF Notification No. GSR 826 CE dtd.16-11-2009 as amended). 2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.					
					Verified & Authorized by  (C.P. Jadhao) Quality Manager

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Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Ambient Air Quality

Format No.: ELPL/QM/TRD/7.8/AA

Report No : ELPL/09-24/277-A	Report Date : 03-10-2024
Name & Address of the Customer: <b>M/s. SUNFLAG IRON &amp; STEEL CO. LTD.</b> Village - Eklari (Wardhi), Tal - Mohadi, Dist - Bhandara	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Ambient Air Sampling Ref Method : As Per Test Method Sample Inward No. : ELPL/Sept-24/32/76/AA-277	Sampling Location : A-2 (Pump House-2 near Water Reservoir) Environment Condition: Sunny (during sampling)
Sampling Date : From 27-09-2024 to 28-09-2024 Sample Receipt Date : 28-09-2024	Sampled by : ELPL Representative
Avg. Ambient Temp : 27.5 °C Avg. Relative Humidity : 88.2 %	Prominent Wind Direction : NW Average Wind Speed : 3.58 km/hr
Period of Analysis : From 30-09-2024 to 03-10-2024	

### Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/ Products Tested : Ambient Air					
1.	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	80	7.42	IS 5182 (Part 2)
2.	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	80	11.9	IS 5182 (Part 6)
3.	Particulate Matter size less than 10 µm (PM <sub>10</sub> )	µg/m <sup>3</sup>	100	60.7	IS 5182 (Part 23)
4.	Particulate Matter size less than 2.5 µm (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	60	29.9	IS : 5182 (Part 24)
Note : 1. * indicates NAAQS (Govt. of India MoEF Notification No. GSR 826-CE dtd.16-11-2009 as amended). 2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.					
					Verified & Authorized by  (C.P. Jadhao) Quality Manager



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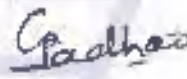
C-11, Amar Enclave Commercial Wing, Jog Layout, Prashant Nagar, Near Ajni Square, Nagpur - 440 015. Tel & Fax: (0712) 2251470, Cell: 9769816882  
Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Ambient Air Quality

Format No.: ELPL/QD4/TRD/7.8/AA

Report No : ELPL/09-24/42-A	Report Date : 11-09-2024
Name & Address of the Customer: <b>M/s. SUNFLAG IRON &amp; STEEL CO. LTD.</b> Village - Eklari (Wardhi), Tal - Mohadi, Dist - Bhandara	
Ref.: Your Purchase Order No. 460002279 Dtd. 09-09-2023.	
Sample Type : Ambient Air Sampling Ref Method : As Per Test Method Sample Inward No. : ELPL/Sept-24/32/17/AA-42	Sampling Location : A3 (STP) Environment Condition: Sunny (during sampling)
Sampling Date : From 02-09-2024 to 03-09-2024 Sample Receipt Date : 08-09-2024	Sampled by : ELPL Representative
Avg. Ambient Temp : 26.6 °C Avg. Relative Humidity : 90.5 %	Prominent Wind Direction : E Average Wind Speed : 4.04 km/hr
Period of Analysis : From 08-09-2024 to 11-09-2024	

### Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/ Products Tested : Ambient Air					
1.	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	80	7.16	IS 5182 (Part 2)
2.	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	80	12.5	IS 5182 (Part 6)
3.	Particulate Matter size less than 10 µm (PM <sub>10</sub> )	µg/m <sup>3</sup>	100	50.9	IS 5182 (Part 23)
4.	Particulate Matter size less than 2.5 µm (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	60	21.6	IS : 5182 (Part 24)
Note : 1. * indicates NAAQS (Govt. of India MoEF Notification No. GSR 826 CB dtd.16-11-2009 as amended). 2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.					
					Verified & Authorized by  (C.P. Jadhao) Quality Manager

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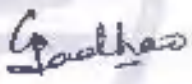
## Test Report

Formel No.: ELPL/QD4/TRD/7.8/AA

### Ambient Air Quality

Report No : ELPL/09-24/46-A	Report Date : 11-09-2024
Name & Address of the Customer: <b>M/s. SUNFLAG IRON &amp; STEEL CO. LTD.</b> Village - Eklari (Warhi), Tal - Mohadi, Dist - Bhandara	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Ambient Air Sampling Ref Method : As Per Test Method Sample Inward No. : ELPL/Sept-24/32/17/AA-46	Sampling Location : A3 (STP) Environment Condition: Sunny (during sampling)
Sampling Date : From 06-09-2024 to 07-09-2024 Sample Receipt Date : 08-09-2024	Sampled by : ELPL Representative
Avg. Ambient Temp : 27.8 °C Avg. Relative Humidity : 91.0 %	Prominent Wind Direction : ENE Average Wind Speed : 3.83 km/hr
Period of Analysis : From 08-09-2024 to 11-09-2024	

### Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/Products Tested : Ambient Air					
1.	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	80	7.25	IS 5182 (Part 2)
2.	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	80	10.3	IS 5182 (Part 6)
3.	Particulate Matter size less than 10 µm (PM <sub>10</sub> )	µg/m <sup>3</sup>	100	48.7	IS 5182 (Part 23)
4.	Particulate Matter size less than 2.5 µm (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	50	18.1	IS : 5182 (Part 24)
Note : 1. * indicates NAAQS (Govt. of India MoEF Notification No. QSR 826 CB dtd. 16-11-2009 as amended). 2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.					
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Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

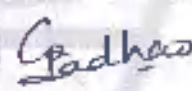
## Test Report

### Ambient Air Quality

Format No.: ELPL/ QD4/TRD/7.8/AA

Report No : ELPL/09-24/122-A	Report Date : 19-09-2024
Name & Address of the Customer: <b>M/s. SUNFLAG IRON &amp; STEEL CO. LTD.</b> Village - Eklari (Wardhi), Tal.- Mohadi, Dist.- Bhandara	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Ambient Air Sampling Ref Method : As Per Test Method Sample Inward No. : ELPL/Sept-24/32/49/AA-122	Sampling Location : A3 (STP) Environment Condition: Sunny (during sampling)
Sampling Date : From 09-09-2024 to 10-09-2024 Sample Receipt Date : 15-09-2024	Sampled by : ELPL Representative
Avg. Ambient Temp : 25.5 °C Avg. Relative Humidity : 91.2 %	Prominent Wind Direction : W Average Wind Speed : 3.66 km/hr
Period of Analysis : From 15-09-2024 to 19-09-2024	

### Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/ Products Tested : Ambient Air					
1.	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	80	7.45	IS 5182 (Part 2)
2.	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	80	11.4	IS 5182 (Part 6)
3.	Particulate Matter size less than 10 µm (PM <sub>10</sub> )	µg/m <sup>3</sup>	100	47.6	IS 5182 (Part 23)
4.	Particulate Matter size less than 2.5 µm (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	60	17.9	IS 5182 (Part 24)
Note : 1. * indicates NAAQS (Govt. of India MoEF Notification No. GSR 826 CE dtd.16-11-2009 as amended). 2. Test results relates to sample collected & tested only for the selected parameters . It shall not be reproduced partially or fully Without prior approval of ELPL.					
					Verified & Authorized by  (C.P. Jadhao) Quality Manager

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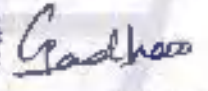
## Test Report

Format No.: ELPL/ QD4/TRD/7.8/AA

### Ambient Air Quality

Report No : ELPL/09-24/126-A	Report Date : 19-09-2024
Name & Address of the Customer: <b>M/s. SUNFLAG IRON &amp; STEEL CO. LTD.</b> Village - Eklari (Wardhi), Tal.- Mohadi, Dist.- Bhandara	
Ref.: Your Purchase Order No. 4600062279 Dtd. 09-09-2023.	
Sample Type : Ambient Air Sampling Ref Method : As Per Test Method Sample Inward No. : ELPL/Sept-24/32/49/AA-126	Sampling Location : A3 (STP) Environment Condition: Sunny (during sampling)
Sampling Date : From 13-09-2024 to 14-09-2024 Sample Receipt Date : 15-09-2024	Sampled by : LPL Representative
Avg. Ambient Temp : 25.8 °C Avg. Relative Humidity : 91.2 %	Prominent Wind Direction : SW Average Wind Speed : 3.5 km/hr
Period of Analysis : From 15-09-2024 to 19-09-2024	

### Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/ Products Tested : Ambient Air					
1.	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	88	8.84	IS 5182 (Part 2)
2.	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	80	13.2	IS 5182 (Part 6)
3.	Particulate Matter size less than 10 µm (PM <sub>10</sub> )	µg/m <sup>3</sup>	100	49.7	IS 5182 (Part 23)
4.	Particulate Matter size less than 2.5 µm (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	60	19.5	IS : 5182 (Part 24)
Note : 1. * indicates NAAQS (Govt. of India MoEF Notification No. GSR 826 CE dtd.16-11-2009 as amended). 2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.					
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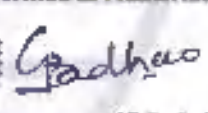
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Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Ambient Air Quality

Format No.: ELPL/QD4/TRD/7.8/AA

Report No : ELPL/09-24/226-A	Report Date : 28-09-2024
Name & Address of the Customer : <b>M/s. SUNFLAG IRON &amp; STEEL CO. LTD.</b> Village - Eklari (Wardh), Tal - Mohadi, Dist - Bhandara	
Ref.: Your Purchase Order No, 4600002279 Dtd. 09-09-2023.	
Sample Type : Ambient Air Sampling Ref Method : As Per Test Method Sample Inward No. : ELPL/Sept-24/32/64/AA-226	Sampling Location : A3 (STP) Environment Condition: Sunny (during sampling)
Sampling Date : From 16-09-2024 to 17-09-2024 Sample Receipt Date : 25-09-2024	Sampled by : ELPL Representative
Avg. Ambient Temp : 28.3 °C Avg. Relative Humidity : 66.8 %	Prominent Wind Direction : NNW Average Wind Speed : 5.75 km/hr
Period of Analysis : From 25-09-2024 to 28-09-2024	

## Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/Products Tested : Ambient Air					
1.	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	80	7.81	IS 5182 (Part 2)
2.	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	80	11.4	IS 5182 (Part 6)
3.	Particulate Matter size less than 10 µm (PM <sub>10</sub> )	µg/m <sup>3</sup>	100	54.8	IS 5182 (Part 23)
4.	Particulate Matter size less than 2.5 µm (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	60	23.7	IS 5182 (Part 24)
Note : 1. * indicates NAAQS (Govt. of India MoEF Notification No. GSR 826 CE dtd.16-11-2009 as amended). 2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.					
					Verified & Authorized by  (C.P. Jadhao) Quality Manager

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Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Ambient Air Quality

Format No.: ELPL/ QD4/TRD/7.2/AA

Report No : ELPL/09-24/230-A	Report Date : 28-09-2024
Name & Address of the Customer: <b>M/s. SUNFLAG IRON &amp; STEEL CO. LTD.</b> Village - Eklari (Warhi), Tal.- Mohadi, Dist.- Bhandara	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Ambient Air Sampling Ref Method : As Per Test Method Sample Inward No. : ELPL/Sept-24/32/64/AA-230	Sampling Location : A3 (STP) Environment Condition: Sunny (during sampling)
Sampling Date : From 20-09-2024 to 21-09-2024 Sample Receipt Date : 25-09-2024	Sampled by : ELPL Representative
Avg. Ambient Temp : 26.6 °C Avg. Relative Humidity : 65.8 %	Prominent Wind Direction : NW Average Wind Speed : 6.83 km/hr
Period of Analysis : From 25-09-2024 to 28-09-2024	

### Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/Products Tested : Ambient Air					
1.	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	80	8.89	IS 5182 (Part 2)
2.	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	80	13.1	IS 5182 (Part 6)
3.	Particulate Matter size less than 10 µm (PM <sub>10</sub> )	µg/m <sup>3</sup>	100	52.4	IS 5182 (Part 23)
4.	Particulate Matter size less than 2.5 µm (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	60	21.2	IS 5182 (Part 24)

Note : 1. \* indicates NAAQS (Govt. of India MoEF Notification No. GSR 826 CE dtd.16-11-2009 as amended).  
2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.



Verified & Authorized by

*C.P. Jadhao*

(C.P. Jadhao)  
Quality Manager

\*\* End of the Report \*\*





TC-12331

**EARTHCARE LABS PRIVATE LIMITED****Environmental Laboratory & Consultancy Organization**

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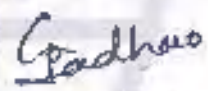
C-11, Amar Enclave Commercial Wing, Jog Layout, Prashant Nagar, Near Ajni Square, Nagpur - 440 015, Tel & Fax: (0712) 2251470, Cell: 9766616882  
Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com**Test Report**

Format No.: ELPL/QM/TRD/7.8/AA

**Ambient Air Quality**

Report No : ELPL/09-24/274-A	Report Date : 03-10-2024
Name & Address of the Customer: <b>M/s. SUNFLAG IRON &amp; STEEL CO. LTD.</b> Village - Eklari (Warhi), Tal.- Mohadi, Dist.- Bhandara	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Ambient Air	Sampling Location : A3 (STP)
Sampling Ref Method : As Per Test Method	Environment Condition: Sunny (during sampling)
Sample Inward No. : ELPL/Sept-24/32/76/AA-274	
Sampling Date : From 23-09-2024 to 24-09-2024	Sampled by : ELPL Representative
Sample Receipt Date : 28-09-2024	
Avg. Ambient Temp : 28.2 °C	Prominent Wind Direction : SE
Avg. Relative Humidity : 85.9 %	Average Wind Speed : 2.79 km/hr
Period of Analysis : From 30-09-2024 to 03-10-2024	

**Results of Analysis**

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/Products Tested : Ambient Air					
1.	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	80	7.10	IS 5182 (Part 2)
2.	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	80	11.6	IS 5182 (Part 6)
3.	Particulate Matter size less than 10 µm (PM <sub>10</sub> )	µg/m <sup>3</sup>	100	55.4	IS 5182 (Part 23)
4.	Particulate Matter size less than 2.5 µm (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	60	23.1	IS 5182 (Part 24)
Note : 1. * indicates NAAQS (Govt. of India MoEF Notification No. GSR 826 CE dtd.16-11-2009 as amended). 2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.					
				Verified & Authorized by  (C.P. Jadhao) Quality Manager	



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TC-12331

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Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com**Test Report  
Ambient Air Quality**

Form No.: ELPL/QD4/TRD/7.8/AA

Report No : ELPL/09-24/278-A	Report Date : 03-10-2024
Name & Address of the Customer: <b>M/s. SUNFLAG IRON &amp; STEEL CO. LTD.</b> Village - Eklari (Warhi), Tal.- Mohadi, Dist.- Bhandara	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Ambient Air	Sampling Location : A3 (STP)
Sampling Ref Method : As Per Test Method	Environment Condition: Sunny (during sampling)
Sample Inward No. : ELPL/Sept-24/32/76/AA-278	
Sampling Date : From 27-09-2024 to 28-09-2024	Sampled by : ELPL Representative
Sample Receipt Date : 28-09-2024	
Avg. Ambient Temp : 27.5 °C	Prominent Wind Direction : NW
Avg. Relative Humidity : 88.2 %	Average Wind Speed : 3.58 km/hr
Period of Analysis : From 30-09-2024 to 03-10-2024	

**Results of Analysis**

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/ Products Tested : Ambient Air					
1.	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	80	8.62	IS 5182 (Part 2)
2.	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	80	13.8	IS 5182 (Part 6)
3.	Particulate Matter size less than 10 µm (PM <sub>10</sub> )	µg/m <sup>3</sup>	100	57.6	IS 5182 (Part 23)
4.	Particulate Matter size less than 2.5 µm (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	60	25.8	IS 5182 (Part 24)
Note : 1. * Indicates NAAQS (Govt. of India MoEF Notification No. GSR 826 CE dtd.16-11-2009 as amended). 2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.					
					Verified & Authorized by  (C.P. Jadhao) Quality Manager

\*\* End of the Report \*\*





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Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Ambient Air Quality

Format No.: ELPL/QD4/TRD/7.8/AA

Report No : ELPL/09-24/43-A	Report Date : 11-09-2024
Name & Address of the Customer: <b>M/s. SUNFLAG IRON &amp; STEEL CO. LTD.</b> Village - Eklari (Wardhi), Tal- Mohadi, Dist- Bhandara	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Ambient Air Sampling Ref Method : As Per Test Method Sample Inward No. : ELPL/Sapt-24/32/17/AA-43	Sampling Location : A4 (Guest House) Environment Condition : Sunny (during sampling)
Sampling Date : From 02-09-2024 to 03-09-2024 Sample Receipt Date : 08-09-2024	Sampled by : ELPL Representative
Avg. Ambient Temp : 26.6 °C Avg. Relative Humidity : 90.5 %	Prominent Wind Direction : E Average Wind Speed : 4.04 km/hr
Period of Analysis : From 08-09-2024 to 11-09-2024	

### Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/Products Tested : Ambient Air					
1.	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	80	8.62	IS 5182 (Part 2): 2001 RA 2017
2.	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	80	11.4	IS 5182 (Part 6): 2006 RA 2017
3.	Particulate Matter size less than 10 µm (PM <sub>10</sub> )	µg/m <sup>3</sup>	100	54.2	IS 5182 (Part 23): 2006 RA 2017
4.	Particulate Matter size less than 2.5 µm (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	60	22.6	IS : 5182 (Part 24) : 2019

Note : 1. \* Indicates NAAQS (Govt. of India MoEF Notification No. GSR 826 CE dtd.16-11-2009 as amended).  
2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.



Verified & Authorized by

*C.P. Jadhao*

(C.P. Jadhao)  
Quality Manager

\*\* End of the Report \*\*





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Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Ambient Air Quality

Format No.: ELPL/QM/TRD/7.3/AA

Report No : ELPL/09-24/47-A	Report Date : 11-09-2024
Name & Address of the Customer: <b>M/s. SUNFLAG IRON &amp; STEEL CO. LTD.</b> Village - Eklari (Warthi), Tal.- Mohadi, Dist.- Bhandara	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Ambient Air Sampling Ref Method : As Per Test Method Sample Inward No. : ELPL/Sept-24/32/17/AA-47	Sampling Location : A4 (Guest House) Environment Condition : Sunny (during sampling)
Sampling Date : From 06-09-2024 to 07-09-2024 Sample Receipt Date : 08-09-2024	Sampled by : ELPL Representative
Avg. Ambient Temp : 27.8 °C Avg. Relative Humidity : 91.0 %	Prominent Wind Direction : ENE Average Wind Speed : 3.83 km/hr
Period of Analysis : From 08-09-2024 to 11-09-2024	

## Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/Products Tested : Ambient Air					
1.	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	80	8.10	IS 5182 (Part 2)
2.	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	80	14.1	IS 5182 (Part 6)
3.	Particulate Matter size less than 10 µm (PM <sub>10</sub> )	µg/m <sup>3</sup>	100	56.6	IS 5182 (Part 23)
4.	Particulate Matter size less than 2.5 µm (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	60	23.9	IS : 5182 (Part 24)
<b>Note :</b> 1. * indicates NAAQS (Govt. of India MoEF Notification No. GSR 826 CE dtd.16-11-2009 as amended). 2. Test results relates to sample collected & tested only for the selected parameters . It shall not be reproduced partially or fully Without prior approval of ELPL.					
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Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Ambient Air Quality

Format No.: ELPL/QD4/TRD/7.8/AA

Report No : ELPL/09-24/123-A	Report Date : 19-09-2024
Name & Address of the Customer: <b>M/s. SUNFLAG IRON &amp; STEEL CO. LTD.</b> Village - Eklari (Wardi), Tal.-Mohadi, Dist.- Bhandara	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Ambient Air Sampling Ref Method : As Per Test Method Sample Inward No. : ELPL/Sept-24/32/49/AA-123	Sampling Location : A4 (Guest House) Environment Condition: Sunny (during sampling)
Sampling Date : From 09-09-2024 to 10-09-2024 Sample Receipt Date : 15-09-2024	Sampled by : ELPL Representative
Avg. Ambient Temp : 25.5 °C Avg. Relative Humidity : 91.2 %	Prominent Wind Direction : W Average Wind Speed : 3.66 km/hr
Period of Analysis : From 15-09-2024 to 19-09-2024	

## Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/ Products Tested : Ambient Air					
1.	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	80	8.92	IS 5182 (Part 2): 2001 RA 2017
2.	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	80	13.2	IS 5182 (Part 6) : 2006 RA 2017
3.	Particulate Matter size less than 10 µm (PM <sub>10</sub> )	µg/m <sup>3</sup>	100	57.4	IS 5182 (Part 23): 2006 RA 2017
4.	Particulate Matter size less than 2.5 µm (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	60	25.6	IS : 5182 (Part 24) : 2019

Note : 1. \* indicates NAAQS (Govt. of India MoEF Notification No. GSR 826 CE dtd.16-11-2009 as amended).  
2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.



Verified & Authorized by

*C.P. Jadhao*

(C.P. Jadhao)  
Quality Manager

\*\* End of the Report \*\*





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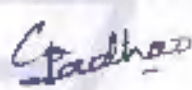
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Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Ambient Air Quality

Format No.: ELPL/QD4/TRD/7.8/AA

Report No : ELPL/09-24/127-A	Report Date : 19-09-2024
Name & Address of the Customer: <b>M/s. SUNFLAG IRON &amp; STEEL CO. LTD.</b> Village - Eklari (Warhi), Tal.- Mohadi, Dist.- Bhandara	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Ambient Air Sampling Ref Method : As Per Test Method Sample Inward No. : ELPL/Sept-24/32/49/AA-127	Sampling Location : A4 (Guest House) Environment Condition: Sunny (during sampling)
Sampling Date : From 13-09-2024 to 14-09-2024 Sample Receipt Date : 15-09-2024	Sampled by : LPL Representative
Avg. Ambient Temp : 25.6 °C Avg. Relative Humidity : 91.2 %	Prominent Wind Direction : SW Average Wind Speed : 3.5 km/hr
Period of Analysis : From 15-09-2024 to 19-09-2024	

### Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/Products Tested : Ambient Air					
1.	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	80	7.38	IS 5182 (Part 2)
2.	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	80	12.3	IS 5182 (Part 6)
3.	Particulate Matter size less than 10 µm (PM <sub>10</sub> )	µg/m <sup>3</sup>	100	55.5	IS 5182 (Part 23)
4.	Particulate Matter size less than 2.5 µm (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	60	23.1	IS 5182 (Part 24)
Note : 1. * indicates NAAQS (Govt. of India MoEF Notification No. GSR 826 CE dtd. 16-11-2009 as amended). 2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.					
					Verified & Authorized by  (C.P. Jadhao) Quality Manager

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TC-12331

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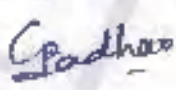
Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

**Test Report  
Ambient Air Quality**

Format No.: ELPL/ QD4/TRD/7.8/AA

Report No : ELPL/09-24/227-A	Report Date : 28-09-2024
Name & Address of the Customer: <b>M/s. SUNFLAG IRON &amp; STEEL CO. LTD.</b> Village - Eklari (Wardhi), Tal.- Mohadi, Dist.- Bhandara	
Ref.: Your Purchase Order No. 460002279 Dtd. 09-09-2023.	
Sample Type : Ambient Air	Sampling Location : A4 (Guest House)
Sampling Ref Method : As Per Test Method	Environment Condition : Sunny (during sampling)
Sample Inward No. : ELPL/Sept-24/32/64/AA-227	
Sampling Date : From 16-09-2024 to 17-09-2024	Sampled by : ELPL Representative
Sample Receipt Date : 25-09-2024	
Avg. Ambient Temp : 28.3 °C	Prominent Wind Direction : NNW
Avg. Relative Humidity : 66.8 %	Average Wind Speed : 5.75 km/hr
Period of Analysis : From 25-09-2024 to 28-09-2024	

**Results of Analysis**

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/ Products Tested : Ambient Air					
1.	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	80	7.27	IS 5182 (Part 2)
2.	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	80	12.2	IS 5182 (Part 6)
3.	Particulate Matter - size less than 10 µm (PM <sub>10</sub> )	µg/m <sup>3</sup>	100	51.4	IS 5182 (Part 23)
4.	Particulate Matter size less than 2.5 µm (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	60	20.7	IS 5182 (Part 24)
Note : 1. * indicates NAAQS (Govt. of India MoEF Notification No. GSR 126 CE dtd.16-11-2009 as amended). 2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.					
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Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Ambient Air Quality

Format No.: ELPL/QD4/TRD/7.8/AA

Report No : ELPL/09-24/231-A	Report Date : 28-09-2024
Name & Address of the Customer: <b>M/s. SUNFLAG IRON &amp; STEEL CO. LTD.</b> Village - Bklari (Warhi), Tal.- Mohadi, Dist.- Bhandara	
Ref.: Your Purchase Order No. 460002279 Dtd. 09-09-2023.	
Sample Type : Ambient Air	Sampling Location : A4 (Guest House)
Sampling Ref Method : As Per Test Method	Environment Condition : Sunny (during sampling)
Sample Inward No. : ELPL/Sept-24/32/64/AA-231	
Sampling Date : From 20-09-2024 to 21-09-2024	Sampled by : ELPL Representative
Sample Receipt Date : 25-09-2024	
Avg. Ambient Temp : 26.6 °C	Prominent Wind Direction : NW
Avg. Relative Humidity : 65.8 %	Average Wind Speed : 6.83 km/hr
Period of Analysis : From 25-09-2024 to 28-09-2024	

### Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/ Products Tested : Ambient Air					
1.	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	80	8.79	IS 5182 (Part 2)
2.	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	80	13.7	IS 5182 (Part 6)
3.	Particulate Matter size less than 10 µm (PM <sub>10</sub> )	µg/m <sup>3</sup>	100	53.9	IS 5182 (Part 23)
4.	Particulate Matter size less than 2.5 µm (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	60	23.5	IS 5182 (Part 24)

Note : 1. \* indicates NAAQS (Govt. of India MoEF Notification No. GSR 826 CE dtd.16-11-2009 as amended).

2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.



Verified & Authorized by

*C.P. Jadhao*

(C.P. Jadhao)  
Quality Manager

\*\* End of the Report \*\*





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Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Ambient Air Quality

Format No.: ELPL/ QD4/TRD/7.8/AA

Report No : ELPL/09-24/275-A	Report Date : 03-10-2024
Name & Address of the Customer: <b>M/s. SUNFLAG IRON &amp; STEEL CO. LTD.</b> Village - Eklari (Warhi), Tal.- Mohadi, Dist.- Bhandara	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Ambient Air Sampling Ref Method : As Per Test Method Sample Inward No. : ELPL/Sept-24/32/76/AA-275	Sampling Location : A4 (Guest House) Environment Condition : Sunny (during sampling)
Sampling Date : From 23-09-2024 to 24-09-2024 Sample Receipt Date : 28-09-2024	Sampled by : ELPL Representative
Avg. Ambient Temp : 28.2 °C Avg. Relative Humidity : 85.9 %	Prominent Wind Direction : SE Average Wind Speed : 2.79 km/hr
Period of Analysis : From 30-09-2024 to 03-10-2024	

### Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/ Products Tested : Ambient Air					
1.	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	80	6.65	IS 5182 (Part 2)
2.	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	80	10.8	IS 5182 (Part 6)
3.	Particulate Matter size less than 10 µm (PM <sub>10</sub> )	µg/m <sup>3</sup>	100	48.2	IS 5182 (Part 23)
4.	Particulate Matter size less than 2.5 µm (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	60	18.7	IS 5182 (Part 24)

Note : 1. \* indicates NAAQS (Govt. of India MoEF Notification No. GSR 826 CE dtd.16-11-2009 as amended).  
2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.



Verified & Authorized by

*C.P. Jadhao*

(C.P. Jadhao)  
Quality Manager

\*\* End of the Report \*\*



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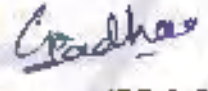
C-11, Amar Enclave Commercial Wing, Jog Layout, Prashant Nagar, Near Ajni Square, Nagpur - 440 015, Tel & Fax: (0712) 2251470, Cell: 9766616862  
Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Ambient Air Quality

Format No.: ELPL/ QD4/TRD/7.8/AA

Report No : ELPL/09-24/279-A	Report Date : 03-10-2024
Name & Address of the Customer: <b>M/s. SUNFLAG IRON &amp; STEEL CO. LTD.</b> Village - Eklari (Warhi), Tal.- Mohadi, Dist.- Bhandara	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Ambient Air	Sampling Location : A4 (Guest House)
Sampling Ref Method : As Per Test Method	Environment Condition : Sunny (during sampling)
Sample Inward No. : ELPL/Sept-24/32/76/AA-279	
Sampling Date : From 27-09-2024 to 28-09-2024	Sampled by : ELPL Representative
Sample Receipt Date : 28-09-2024	
Avg. Ambient Temp : 27.5 °C	Prominent Wind Direction : NW
Avg. Relative Humidity : 88.2 %	Average Wind Speed : 3.58 km/hr
Period of Analysis : From 30-09-2024 to 03-10-2024	

### Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/ Products Tested : Ambient Air					
1.	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	80	7.73	IS 5182 (Part 2)
2.	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	80	11.4	IS 5182 (Part 6)
3.	Particulate Matter size less than 10 µm (PM <sub>10</sub> )	µg/m <sup>3</sup>	100	50.7	IS 5182 (Part 23)
4.	Particulate Matter size less than 2.5 µm (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	60	20.9	IS 5182 (Part 24)
Note : 1. * indicates NAAQS (Govt. of India MoEF Notification No. GSR 826 CE dtd.16-11-2009 as amended). 2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.					
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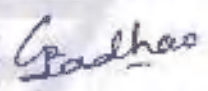
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Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Stack Emission Quality

Format No.: ELPL/QD4/TRD/7.8/S

Report No. : ELPL/09-24/45-A	Report Date : 17-09-2024
Name & Address of the Customer : M/s. SUNFLAG IRON & STEEL CO. LTD. Village - Eldari (Warthi), Tal.- Mohadi, Dist. - Bhandara.	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Stack Emission	Sampling Location : S-2 Reheating Furnace (ASM) S-1A
Sampling Ref Method : As Per Test Method	Environment Condition : Sunny (during sampling)
Sample Inward No. : ELPL/Sept-24/32/49/S-45	Sampled By : ELPL Representative
Sampling Date : 13-09-2024	
Sample Receipt Date : 14-09-2024	
Stack Height : 30.0 mtr	Temperature of Flue Gas : 224 °C
Stack Diameter at Port : 1.10 mtr	Velocity of Flue Gas : 8.23 m/sec
Type of Fuel : LSHS/Pumace Oil & BF Gas	Flow Rate of Flue Gas : 16425.49 Nm <sup>3</sup> /hr
Period of Analysis : From 14-09-2024 to 17-09-2024	

## Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/ Products Tested : Stack Emission					
1.	Particulate Matter	mg/Nm <sup>3</sup>	50	27.2	IS 11255 (Part 1)
2.	Sulphur Dioxide (as SO <sub>2</sub> )	mg/Nm <sup>3</sup>	300	183.8	IS 11255 (Part 2)
3.	Sulphur Dioxide (as SO <sub>2</sub> )	kg/day	720	72.5	IS 11255 (Part 2)
4.	Oxides of Nitrogen (as NO <sub>x</sub> )	mg/Nm <sup>3</sup>	400	172.2	IS 11255 (Part 7)
Note : 1. *Indicates Consent No.: Format I.O/CAC/UAN No. MPCB-CONSENT-0000163341/CR/2307000707 Dtd. 13-07-2023. 2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.					
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C-11, Amar Enclave Commercial Wing, Jog Layout, Prashant Nagar, Near Ajni Square, Nagpur - 440 015, Tel & Fax: (0712) 2251470, Cell: 9786618882  
Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Stack Emission Quality

Format No.: ELPL/QD4/TRD/7.8/8

Report No. : ELPL/09-24/54-A	Report Date : 20-09-2024
Name & Address of the Customer : M/s. SUNFLAG IRON & STEEL CO. LTD. Village - Eklari (Warhi), Tal.- Mohadi, Dist.- Bhandara.	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Stack Emission	Sampling Location : S-2 Reheating Furnace (ASM) S-1A
Sampling Ref. Method : As Per Test Method	Environment Condition : Sunny (during sampling)
Sample Inward No. : ELPL/Sept-24/32/64/S-54	Sampled By : ELPL Representative
Sampling Date : 16-09-2024	
Sample Receipt Date : 16-09-2024	
Stack Height : 30.0 mtr	Temperature of Flue Gas : 218 °C
Stack Diameter at Port : 1.10 mtr	Velocity of Flue Gas : 7.81 m/sec
Type of Fuel : LSHS/Furnace Oil & BP Gas	Flow Rate of Flue Gas : 15778.37 Nm <sup>3</sup> /hr
Period of Analysis : From 17-09-2024 to 20-09-2024	

## Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/ Products Tested : Stack Emission					
1.	Particulate Matter	mg/Nm <sup>3</sup>	50	25.2	IS 11255 (Part 1)
2.	Sulphur Dioxide (as SO <sub>2</sub> )	mg/Nm <sup>3</sup>	300	177.6	IS 11255 (Part 2)
3.	Sulphur Dioxide (as SO <sub>2</sub> )	kg/day	720	66.5	IS 11255 (Part 2)
4.	Oxides of Nitrogen (as NO <sub>x</sub> )	mg/Nm <sup>3</sup>	400	184.2	IS 11255 (Part 7)

Note : 1. \*Indicates Consent No.: Form I.O/CAC/UA/N No. MPCB-CONSENT-0000163341/CR/2307000707 Dtd. 13-07-2023.  
2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.



Verified & Authorized by

*G. P. Jadhao*

(C.P. Jadhao)  
Quality Manager

\*\* End of the Report \*\*





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Environmental Laboratory & Consultancy Organization

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Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Stack Emission Quality

Format No.: ELPL/QD4/TRD/7.8/S

Report No. : ELPL/09-24/84-A	Report Date : 28-09-2024
Name & Address of the Customer : <b>MA. SUNFLAG IRON &amp; STEEL CO. LTD.</b> Village - Eklari (Warhi), Tal.- Mohadi, Dist.- Bhandara.	
Ref.: Your Purchase Order No. 460002279 Dtd. 09-09-2023.	
Sample Type : Stack Emission	Sampling Location : S-2 Reheating Furnace (ASM) S-1A
Sampling Ref Method : As Per Test Method	Environment Condition : Sunny (during sampling)
Sample Inward No. : ELPL/Sept-24/32/76/S-84	
Sampling Date : 23-09-2024	Sampled By : ELPL Representative
Sample Receipt Date : 23-09-2024	
Stack Height : 30.0 mtr	Temperature of Flue Gas : 208 °C
Stack Diameter at Port : 1.10 mtr	Velocity of Flue Gas : 5.67 m/sec
Type of Fuel : LSHS/Furnace Oil & BF Gas	Flow Rate of Flue Gas : 17880.44 Nm <sup>3</sup> /hr
Period of Analysis : From 24-09-2024 to 28-09-2024	

## Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/ Products Tested : Stack Emission					
1.	Particulate Matter	mg/Nm <sup>3</sup>	50	18.1	IS 11255 (Part 1)
2.	Sulphur Dioxide (as SO <sub>2</sub> )	mg/Nm <sup>3</sup>	300	170.3	IS 11255 (Part 2)
3.	Sulphur Dioxide (as SO <sub>2</sub> )	kg/day	720	72.9	IS 11255 (Part 2)
4.	Oxides of Nitrogen (as NO <sub>2</sub> )	mg/Nm <sup>3</sup>	400	179.3	IS 11255 (Part 7)

Note : 1. \*Indicates Consent No.: Format I/0/CAC/UAN No. MPCB-CONSENT-0000163341/CR/2307000707 Dtd. 13-07-2023.  
2. Test results relate to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.



Verified & Authorized by

*C.P. Jadhao*

(C.P. Jadhao)  
Quality Manager

\*\* End of the Report \*\*





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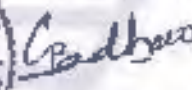
C-11, Amar Enclave Commercial Wing, Jog Layout, Prashant Nagar, Near Ajni Square, Nagpur - 440 015, Tel & Fax: (0712) 2251470, Cell: 9788618862  
Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Stack Emission Quality

Format No.: ELPL/QDA/TRD/7.8/S

Report No. : ELPL/09-24/05-A	Report Date: 07-09-2024
Name & Address of the Customer : M/s. SUNFLAG IRON & STEEL CO. LTD. Village - Eklari (Warhi), Tal.- Mohadi, Dist.- Bhandara.	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Stack Emission	Sampling Location : S-3 FBC Boiler ESP (CFF)
Sampling Ref Method : As Per Test Method	Environment Condition : Sunny (during sampling)
Sample Inward No. : ELPL/Sept-24/32/17/S-05	
Sampling Date : 04-09-2024	Sampled By : ELPL Representative
Sample Receipt Date : 05-09-2024	
Stack Height : 55.0 mtr	Temperature of Flue Gas : 136 °C
Stack Diameter at Port : 1.6 mtr	Velocity of Flue Gas : 10.79 m/sec
Type of Fuel : Coal	Flow Rate of Flue Gas : 55358.73 Nm <sup>3</sup> /hr
Period of Analysis : From 05-09-2024 to 07-09-2024	

## Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/Products Tested : Stack Emission					
1.	Particulate Matter	mg/Nm <sup>3</sup>	50	41.6	IS 11255 (Part 1)
2.	Sulphur Dioxide (as SO <sub>2</sub> )	mg/Nm <sup>3</sup>	—	356.7	IS 11255 (Part 2)
3.	Sulphur Dioxide (as SO <sub>2</sub> )	kg/day	4100	473.9	IS 11255 (Part 2)
4.	Oxides of Nitrogen (as NO <sub>2</sub> )	mg/Nm <sup>3</sup>	—	349.1	IS 11255 (Part 7)
Note : 1. *indicates Consent No.: Format I.O/CAC/UAN No. MPCB-CONSENT-0000163341/CR/2307000707 Dtd. 13-07-2023. 2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.					
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TC-42334

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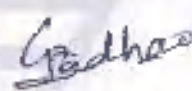
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Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com**Test Report  
Stack Emission Quality**

Format No.: ELPL/ QD4/TRD/7.8/S

Report No. : ELPL/09-24/47-A	Report Date: 17-09-2024
Name & Address of the Customer : <b>M/s. SUNFLAG IRON &amp; STEEL CO. LTD.</b> Village - Eklari (Warhi), Tal. - Mohadi, Dist. - Bhandara.	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Stack Emission	Sampling Location : S-3 FBC Boiler ESP (C/P)
Sampling Ref Method : As Per Test Method	Environment Condition: Sunny (during sampling)
Sample Inward No. : ELPL/Sept-24/32/49/S-47	Sampled By : ELPL Representative
Sampling Date : 14-09-2024	
Sample Receipt Date : 14-09-2024	
Stack Height : 55.0 mtr	Temperature of Flue Gas : 138 °C
Stack Diameter at Port : 1.6 mtr	Velocity of Flue Gas : 10.27 m/sec
Type of Fuel : Coal	Flow Rate of Flue Gas : 52437.98 Nm <sup>3</sup> /hr
Period of Analysis : From 15-09-2024 to 17-09-2024	

**Results of Analysis**

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/ Products Tested : Stack Emission					
1.	Particulate Matter	mg/Nm <sup>3</sup>	50	36.3	IS 11255 (Part 1)
2.	Sulphur Dioxide (as SO <sub>2</sub> )	mg/Nm <sup>3</sup>	—	363.8	IS 11255 (Part 2)
3.	Sulphur Dioxide (as SO <sub>2</sub> )	kg/day	4100	457.8	IS 11255 (Part 2)
4.	Oxides of Nitrogen (as NO <sub>2</sub> )	mg/Nm <sup>3</sup>	—	342.9	IS 11255 (Part 7)
Note : 1. *Indicates Consent No.: Format1.0/CAC/UAN No. MPCB-CONSENT-0000163341/CR/23/07000707 Dtd. 13-07-2023. 2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.					
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Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Stack Emission Quality

Form No.: ELPL/ QM/TRD/7.8/9

Report No. : ELPL/09-24/60-A		Report Date: 23-09-2024	
Name & Address of the Customer : M/s. SUNFLAG IRON & STEEL CO. LTD. Village - Eklari (Warhi), Tal.- Mohadi, Dist.- Bhandara.			
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.			
Sample Type : Stack Emission		Sampling Location : S-3 FBC Boiler ESP (CPP)	
Sampling Ref Method : As Per Test Method		Environment Condition: Sunny (during sampling)	
Sample Inward No. : ELPL/Sept-24/32/64/S-60		Sampled By : ELPL Representative	
Sampling Date : 20-09-2024		Stack Height : 55.0 mtr	
Sample Receipt Date : 20-09-2024		Stack Diameter at Port : 1.6 mtr	
Type of Fuel : Coal		Temperature of Flue Gas : 128 °C	
		Velocity of Flue Gas : 10.76 m/sec	
		Flow Rate of Flue Gas : 56307.68 Nm <sup>3</sup> /hr	
Period of Analysis : From 21-09-2024 to 23-09-2024			

### Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/ Products Tested : Stack Emission					
1.	Particulate Matter	mg/Nm <sup>3</sup>	50	35.1	IS 11255 (Part 1)
2.	Sulphur Dioxide (as SO <sub>2</sub> )	mg/Nm <sup>3</sup>	—	354.4	IS 11255 (Part 2)
3.	Sulphur Dioxide (as SO <sub>2</sub> )	kg/day	4100	478.6	IS 11255 (Part 2)
4.	Oxides of Nitrogen (as NO <sub>2</sub> )	mg/Nm <sup>3</sup>	—	346.9	IS 11255 (Part 7)

Note : 1. \*Indicates Consent No.: Form 1.0/CAC/11/AN No. MPCB-CONSENT-0000163341/CR/2307000707 Dtd. 13-07-2023.  
2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.



Verified & Authorized by

*C. P. Jadhao*

(C.P. Jadhao)  
Quality Manager

\*\* End of the Report \*\*



TC-12331

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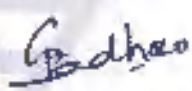
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Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com**Test Report  
Stack Emission Quality**

Form No.: ELPL/ QD4/TRD/7.8/S

Report No. : ELPL/09-24/90-A	Report Date: 29-09-2024
Name & Address of the Customer : M/s. SUNFLAG IRON & STEEL CO. LTD. Village - Eklari (Warhi), Tal.- Mohadi, Dist.- Bhandara.	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Stack Emission	Sampling Location : S-3 FBC Boiler ESP (CPP)
Sampling Ref Method : As Per Test Method	Environment Condition: Sunny (during sampling)
Sample Inward No. : ELPL/Sept-24/32/76/S-90	
Sampling Date : 26-09-2024	Sampled By : ELPL Representative
Sample Receipt Date : 26-09-2024	
Stack Height : 55.0 mtr	Temperature of Flue Gas : 123 °C
Stack Diameter at Port : 1.6 mtr	Velocity of Flue Gas : 9.60 m/sec
Type of Fuel : Coal	Flow Rate of Flue Gas : 50874.39 Nm <sup>3</sup> /hr
Period of Analysis : From 27-09-2024 to 29-09-2024	

**Results of Analysis**

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/ Products Tested : Stack Emission					
1.	Particulate Matter	mg/Nm <sup>3</sup>	50	32.4	IS 11255 (Part 1)
2.	Sulphur Dioxide (as SO <sub>2</sub> )	mg/Nm <sup>3</sup>	--	356.7	IS 11255 (Part 2)
3.	Sulphur Dioxide (as SO <sub>2</sub> )	kg/day	4100	435.5	IS 11255 (Part 2)
4.	Oxides of Nitrogen (as NO <sub>x</sub> )	mg/Nm <sup>3</sup>	--	351.1	IS 11255 (Part 7)
Note : 1. *Indicates Consent No.: Format I.6/CAC/UAN No. MPCB-CONSENT-0000163341/CR/2307000707 Dtd. 13-07-2023. 2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.					
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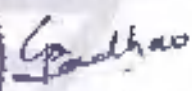
C-11, Amar Enclave Commercial Wing, Jog Layout, Prashant Nagar, Near Ajni Square, Nagpur - 440 015. Tel & Fax: (0712) 2251470, Cell: 9788818882  
Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Stack Emission Quality

Format No.: ELPL/QD4/TRD/7.8/S

Report No. : ELPL/09-24/03-A	Report Date: 07-09-2024
Name & Address of the Customer : M/s. SUNFLAG IRON & STEEL CO. LTD. Village - Eklari (Wazhi), Tal.- Mohadi, Dist.- Bhandara.	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Stack Emission	Sampling Location : S-4 (Reheating Furnace) BSM
Sampling Ref. Method : As Per Test Method	Environment Condition : Sunny (during sampling)
Sample Inward No. : ELPL/Sept-24/32/17/S-03	Sampled By : ELPL Representative
Sampling Date : 02-09-2024	
Sample Receipt Date : 03-09-2024	
Stack Height : 65.0 mtr	Temperature of Flue Gas : 318 °C
Stack Diameter at Port : 1.50 mtr	Velocity of Flue Gas : 12.13 m/sec
Type of Fuel : LSHS/Furnace Oil & BF Gas	Flow Rate of Flue Gas : 37853.26 Nm <sup>3</sup> /hr
Period of Analysis : From 03-09-2024 to 07-09-2024	

## Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/ Products Tested : Stack Emission					
1.	Particulate Matter	mg/Nm <sup>3</sup>	50	26.4	IS 11255 (Part 1)
2.	Sulphur Dioxide (as SO <sub>2</sub> )	mg/Nm <sup>3</sup>	300	178.9	IS 11255 (Part 2)
3.	Sulphur Dioxide (as SO <sub>2</sub> )	kg/day	2916.0	162.5	IS 11255 (Part 2)
4.	Oxides of Nitrogen (as NO <sub>2</sub> )	mg/Nm <sup>3</sup>	400	168.5	IS 11255 (Part 7)
Note : 1. *Indicates Consent No.: Format I. G/CAC/IAN No. MPCB-CONSENT-0000163341/CR/2307000707 Dtd. 13-07-2023. 2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.					
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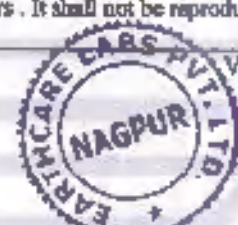
G-11, Amar Enclave Commercial Wing, Jog Layout, Prashant Nagar, Near Ajni Square, Nagpur - 440 015, Tel & Fax: (0712) 2251470, Cell: 9786815862  
Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Stack Emission Quantity

Format No.: ELPL/QD4/TRD/7.8/S

Report No. : ELPL/09-24/38-A	Report Date: 15-09-2024
Name & Address of the Customer : M/s. SUNFLAG IRON & STEEL CO. LTD. Village - Eldari (Warhi), Tal.- Mohadi, Dist.- Bhandara.	
Ref.: Your Purchase Order No. 460002279 Dtd. 09-09-2023.	
Sample Type : Stack Emission	Sampling Location : S-4 (Reheating Furnace) BSM
Sampling Ref Method : As Per Test Method	Environment Condition: Sunny (during sampling)
Sample Inward No. : ELPLSept-24/32/49/8-38	
Sampling Date : 09-09-2024	Sampled By : ELPL Representative
Sample Receipt Date : 10-09-2024	
Stack Height : 65.0 mtr	Temperature of Flue Gas : 305 °C
Stack Diameter at Port : 1.50 mtr	Velocity of Flue Gas : 11.19 m/sec
Type of Fuel : LSHS/Furnace Oil & BF Gas	Flow Rate of Flue Gas : 35708.16 Nm <sup>3</sup> /hr
Period of Analysis : From 10-09-2024 to 15-09-2024	

### Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/Products Tested : Stack Emission					
1.	Particulate Matter	mg/Nm <sup>3</sup>	50	25.4	IS 11255 (Part 1)
2.	Sulphur Dioxide (as SO <sub>2</sub> )	mg/Nm <sup>3</sup>	300	173.1	IS 11255 (Part 2)
3.	Sulphur Dioxide (as SO <sub>2</sub> )	kg/day	2916.0	148.4	IS 11255 (Part 2)
4.	Oxides of Nitrogen (as NO <sub>2</sub> )	mg/Nm <sup>3</sup>	400	161.8	IS 11255 (Part 7)
Note : 1. *Indicates Consent No.: Format1.0/CAC/31AN No. MPCB-CONSENT-0000163341/CB/2307000707 Dtd. 13-07-2023. 2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.					
					<div>  </div> <div> <p>Verified &amp; Authorized by</p> <p><i>C.P. Jadhao</i></p> <p>(C.P. Jadhao) Quality Manager</p> </div>

\*\* End of the Report \*\*





# EARTHCARE LABS PRIVATE LIMITED

Environmental Laboratory & Consultancy Organization

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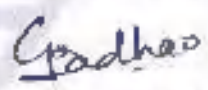
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Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Stack Emission Quality

Format No.: ELPL/QD4/TRD/7.8/8

Report No. : ELPL/09-24/55-A	Report Date: 20-09-2024
Name & Address of the Customer : M/s. SUNFLAG IRON & STEEL CO. LTD. Village - Eklari (Warhi), Tal- Mohadi, Dist.- Bhandara.	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Stack Emission	Sampling Location : S-4 (Reheating Furnace) BSM
Sampling Ref Method : As Per Test Method	Environment Condition: Sunny (during sampling)
Sample Inward No. : ELPL/Sept-24/32/64/S-55	
Sampling Date : 16-09-2024	Sampled By : ELPL Representative
Sample Receipt Date : 16-09-2024	
Stack Height : 65.0 mtr	Temperature of Flue Gas : 312 °C
Stack Diameter at Port : 1.50 mtr	Velocity of Flue Gas : 10.72 m/sec
Type of Fuel : LSHS/Furnace Oil & BF Gas	Flow Rate of Flue Gas : 33799.02 Nm <sup>3</sup> /hr
Period of Analysis : From 17-09-2024 to 20-09-2024	

### Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/ Products Tested : Stack Emission					
1.	Particulate Matter	mg/Nm <sup>3</sup>	50	22.1	IS 11255 (Part 1)
2.	Sulphur Dioxide (as SO <sub>2</sub> )	mg/Nm <sup>3</sup>	300	180.3	IS 11255 (Part 2)
3.	Sulphur Dioxide (as SO <sub>2</sub> )	kg/day	2916.0	146.3	IS 11255 (Part 2)
4.	Oxides of Nitrogen (as NO <sub>2</sub> )	mg/Nm <sup>3</sup>	400	173.2	IS 11255 (Part 7)
Note : 1. *Indicates Consent No.: Form 1.0/CAC/UAN No. MPCB-CONSENT-0000163341/CR/2307000707 Dtd. 13-07-2023. 2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.					
					Verified & Authorized by  (C.P. Jadhao) Quality Manager

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Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Stack Emission Quality

Format No.: ELPL/QD4/TRD/7.8/S

Report No. : ELPL/09-24/85-A	Report Date: 28-09-2024
Name & Address of the Customer : M/s. SUNFLAG IRON & STEEL CO. LTD. Village - Eklari (Warhi), Tal.- Mohadi, Dist.- Bhandara.	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Stack Emission	Sampling Location : S-4 (Reheating Furnace) BSM
Sampling Ref. Method : As Per Test Method	Environment Condition: Sunny (during sampling)
Sample Inward No. : ELPL/Sept-24/32/76/S-85	
Sampling Date : 23-09-2024	Sampled By : ELPL Representative
Sample Receipt Date : 23-09-2024	
Stack Height : 65.0 mtr	Temperature of Flue Gas : 322 °C
Stack Diameter at Port : 1.50 mtr	Velocity of Flue Gas : 11.66 m/sec
Type of Fuel : LSHS/Furnace Oil & BF Gas	Flow Rate of Flue Gas : 36143.41 Nm <sup>3</sup> /hr
Period of Analysis : From 24-09-2024 to 28-09-2024	

### Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/ Products Tested : Stack Emission					
1.	Particulate Matter	mg/Nm <sup>3</sup>	50	24.3	IS 11255 (Part 1)
2.	Sulphur Dioxide (as SO <sub>2</sub> )	mg/Nm <sup>3</sup>	300	172.2	IS 11255 (Part 2)
3.	Sulphur Dioxide (as SO <sub>2</sub> )	kg/day	2916.0	149.4	IS 11255 (Part 2)
4.	Oxides of Nitrogen (as NO <sub>x</sub> )	mg/Nm <sup>3</sup>	400	164.5	IS 11255 (Part 2)
Note : 1. *Indicates Consent No.: Format I, MCAC/UAN No. MPCB-CONSENT-0000163341/CR/2307000707 Dtd. 13-07-2023. 2. Test results relate to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully without prior approval of ELPL.					
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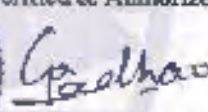
C-11, Amar Enclave Commercial Wing, Jog Layout, Prashant Nagar, Near Ajni Square, Nagpur - 440 015, Tel & Fax: (0712) 2251470, Cell: 9766616862  
Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Stack Emission Quality

Format No.: ELPL/QD4/TRD/7.8/S

Report No.: ELPL/09-24/04-A	Report Date: 07-09-2024
Name & Address of the Customer: M/s. SUNFLAG IRON & STEEL CO. LTD. Village - Eklari (Warhi), Tal. - Mohadi, Dist. - Bhandara.	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Stack Emission	Sampling Location : S-SAPC System to EAF & LHF (SMS)
Sampling Ref Method : As Per Test Method	Environment Condition: Sunny (during sampling)
Sample Inward No. : ELPL/Sept-24/32/17/S-04	Sampled By : ELPL Representative
Sampling Date : 04-09-2024	Temperature of Flue Gas : 82 °C
Sample Receipt Date : 05-09-2024	Velocity of Flue Gas : 13.29 m/sec
Stack Height : 43.0 mtr	Flow Rate of Flue Gas : 567134.82 Nm <sup>3</sup> /hr
Stack Diameter at Port : 4.3 mtr	
Type of Fuel : Electricity	
Period of Analysis : From 05-09-2024 to 07-09-2024	

## Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/ Products Tested : Stack Emission					
1.	Particulate Matter	mg/Nm <sup>3</sup>	50	15.4	IS 11255 (Part 1)
Note : 1. *Indicates Consent No.: Format 1.0/CAC/UAN No. MPCB-CONSENT-0000163341/CR/2307000707 Dtd. 13-07-2023. 2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.					
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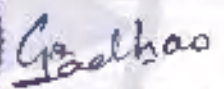
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Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Stack Emission Quality

Format No.: ELPL/QD4/TRD/7.8/S

Report No.: ELPL/09-24/46-A	Report Date: 16-09-2024
Name & Address of the Customer : M/s. SUNFLAG IRON & STEEL CO. LTD. Village - Eklari (Warhi), Tal.- Mohadi, Dist.- Bhandara.	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Stack Emission	Sampling Location : S-5 APC System to EAF & LHF (SMS)
Sampling Ref Method : As Per Test Method	Environment Condition: Sunny (during sampling)
Sample Inward No. : ELPL/Sept-24/32/49/S-46	Sampled By : ELPL Representative
Sampling Date : 13-09-2024	
Sample Receipt Date : 14-09-2024	
Stack Height : 43.0 mtr	Temperature of Flue Gas : 87 °C
Stack Diameter at Port : 4.3 mtr	Velocity of Flue Gas : 12.55 m/sec
Type of Fuel : Electricity	Flow Rate of Flue Gas : 528160.78 Nm <sup>3</sup> /hr
Period of Analysis : From 14-09-2024 to 16-09-2024	

## Results of Analysis

Sr. No.	Test Parameters	Unit	Norm*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/ Products Tested : Stack Emission					
1.	Particulate Matter	mg/Nm <sup>3</sup>	50	21.7	IS 11255 (Part 1)
Note : 1. *Indicates Consent No. Format 1.0/CAC/UAN No. MPCB-CONSENT-000016334/ACR/2307000707 Dtd. 13-07-2023. 2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.					
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TC-12331

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Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com**Test Report  
Stack Emission Quality**

Format No.: ELPL/QD4/TRD/7.8/S

Report No. : ELPL/09-24/59-A	Report Date: 22-09-2024
Name & Address of the Customer : M/s. SUNFLAG IRON & STEEL CO. LTD. Village - Eklari (Warhi), Tal.- Mohadi, Dist.- Bhandara.	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Stack Emission	Sampling Location : S-5 APC System to EAF & LHF (SMS)
Sampling Ref Method : As Per Test Method	Environment Condition: Sunny (during sampling)
Sample Inward No. : ELPL/Sept-24/32/64/S-59	
Sampling Date : 19-09-2024	Sampled By : ELPL Representative
Sample Receipt Date : 19-09-2024	
Stack Height : 43.0 mtr	Temperature of Flue Gas : 92 °C
Stack Diameter at Port : 4.3 mtr	Velocity of Flue Gas : 12.81 m/sec
Type of Fuel : Electricity	Flow Rate of Flue Gas : 531589.03 Nm <sup>3</sup> /hr
Period of Analysis : From 20-09-2024 to 22-09-2024	

**Results of Analysis**

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/Products Tested : Stack Emission					
1.	Particulate Matter	mg/Nm <sup>3</sup>	50	16.9	IS 11255 (Part 1)
Note : 1. *indicates Consent No.: Format 1.0/CAC/UA No. MPCB-CONSENT-000016334/HCR/2307000707 Dtd. 13-07-2023. 2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.					
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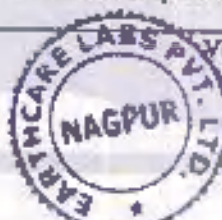
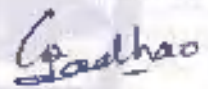
C-11, Amer Enclave Commercial Wing, Jog Layout, Prashant Nagar, Near Ajni Square, Nagpur - 440 015, Tel & Fax: (0712) 2251470, Cell: 9766618862  
Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Stack Emission Quality

Format No.: ELPL/QD4/TRD/7.8/S

Report No. : ELPL/09-24/87-A	Report Date: 28-09-2024
Name & Address of the Customer : M/s. SUNFLAG IRON & STEEL CO. LTD. Village - Eklari (Warhi), Tal.- Mohadi, Dist.- Bhandara.	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Stack Emission	Sampling Location : S-5 APC System to EAF & LHF (SMS)
Sampling Ref Method : As Per Test Method	Environment Condition: Sunny (during sampling)
Sample Inward No. : ELPL/Sept-24/32/76/S-87	Sampled By : ELPL Representative
Sampling Date : 24-09-2024	
Sample Receipt Date : 24-09-2024	
Stack Height : 43.0 mtr	Temperature of Flue Gas : 87 °C
Stack Diameter at Port : 4.3 mtr	Velocity of Flue Gas : 12.20 m/sec
Type of Fuel : Electricity	Flow Rate of Flue Gas : 513458.97 Nm <sup>3</sup> /hr
Period of Analysis : From 25-09-2024 to 28-09-2024	

## Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/Products Tested : Stack Emission					
1.	Particulate Matter	mg/Nm <sup>3</sup>	50	17.8	IS 11255 (Part 1)
Note : 1. *indicates Consent No.: Format I.Q/CAC/UAN No. MPCB-CONSENT-0000163341/CR/2307000707 Dtd. 13-07-2023. 2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.					
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Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Stack Emission Quality

Format No.: ELPL/QD4/TRD/7.8/S

Report No.: ELPL/09-24/08-A		Report Date: 10-09-2024	
Name & Address of the Customer: <b>M/s. SUNFLAG IRON &amp; STEEL CO. LTD.</b> Village - Eklari (Wardhi), Tal. - Mohadi, Dist. - Bhandara.			
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.			
Sample Type : Stack Emission		Sampling Location : S-11 MBP Stoves	
Sampling Ref Method : As Per Test Method		Environment Condition : Sunny (during sampling)	
Sample Inward No. : ELPL/Sept-24/32/17/S-08		Sampled By : ELPL Representative	
Sampling Date : 06-09-2024		Temperature of Flue Gas : 152 °C	
Sample Receipt Date : 07-09-2024		Velocity of Flue Gas : 13.32 m/sec	
Stack Height : 45.0 mtr		Flow Rate of Flue Gas : 102737.59 Nm <sup>3</sup> /hr	
Stack Diameter at Port : 2.0 mtr			
Type of Fuel : MBP Gas (Coke)			
Period of Analysis : From 07-09-2024 to 10-09-2024			

### Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/ Products Tested : Stack Emission					
1.	Particulate Matter	mg/Nm <sup>3</sup>	30	15.3	IS 11255 (Part 1)
2.	Sulphur Dioxide (as SO <sub>2</sub> )	mg/Nm <sup>3</sup>	250	126.4	IS 11255 (Part 2)
3.	Sulphur Dioxide (as SO <sub>2</sub> )	kg/day	1620	311.6	IS 11255 (Part 2)
4.	Oxides of Nitrogen (as NO <sub>x</sub> )	mg/Nm <sup>3</sup>	200	119.3	IS 11255 (Part 7)
Note : 1. *Indicates Consent No.: Formar L.O/CAC/UAN No. MPCB-CONSENT-0000163341/CR/2307000767 Dtd. 13-07-2023. 2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.					
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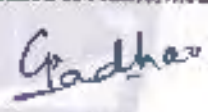
C-11, Amar Enclave Commercial Wing, Jog Layout, Prashant Nagar, Near Ajni Square, Nagpur - 440 015, Tel & Fax: (0712) 2251470, Cell: 9766616882  
Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Stack Emission Quality

Format No.: ELPL/QD4/TRD/7.8/S

Report No.: ELPL/09-24/08-B	Report Date: 10-09-2024
Name & Address of the Customer : M/s. SUNFLAG IRON & STEEL CO. LTD. Village - Eklari (Warhi), Tal. - Mohadi, Dist. - Bhandara.	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Stack Emission	Sampling Location : S-11 MBF Stoves
Sampling Ref Method : As Per Test Method	Environment Condition : Sunny (during sampling)
Sample Inward No. : ELPL/Sept-24/32/17/S-08	Sampled By : ELPL Representative
Sampling Date : 06-09-2024	Temperature of Flue Gas : 152 °C
Sample Receipt Date : 07-09-2024	Velocity of Flue Gas : 13.32 m/sec
Stack Height : 45.0 mtr	Flow Rate of Flue Gas : 102737.59 Nm <sup>3</sup> /hr
Stack Diameter at Port : 2.0 mtr	
Type of Fuel : MBF Gas (Coke)	
Period of Analysis : From 07-09-2024 to 10-09-2024	

## Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/Products Tested : Stack Emission					
1.	Carbon Monoxide (as CO)	mg/Nm <sup>3</sup>	--	BDL (< 0.1)	Multi Gas Analyzer Method USEPA OTM-39
Note : 1. *indicates Consent No.: Format 1,0/CAC/UAN No. MPCB-CONSENT-0000163341/CR/2307000707 Dtd. 13-07-2023. 2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.					
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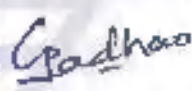
C-11, Amar Enclave Commercial Wing, Jog Layout, Prashant Nagar, Near Ajni Square, Nagpur - 440 015, Tel & Fax: (0712) 2251470, Cell: 9766616862  
Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Stack Emission Quality

Form No: ELPL/ QD4/TRD/7.8/S

Report No. : ELPL/09-24/48-A		Report Date: 17-09-2024	
Name & Address of the Customer : M/s. SUNFLAG IRON & STEEL CO. LTD. Village - Eklari (Wardhi), Tal.- Mohadi, Dist.- Bhandara.			
Ref.: Your Purchase Order No. 4600062279 Dtd. 09-09-2023.			
Sample Type : Stack Emission		Sampling Location : S-11 MBF Stoves	
Sampling Ref Method : As Per Test Method		Environment Condition : Sunny (during sampling)	
Sample Inward No. : ELPL/Sept-24/32/49/S-48		Sampled By : ELPL Representative	
Sampling Date : 14-09-2024		Temperature of Flue Gas : 147 °C	
Sample Receipt Date : 14-09-2024		Velocity of Flue Gas : 12.45 m/sec	
Stack Height : 45.0 mtr		Flow Rate of Flue Gas : 97166.49 Nm <sup>3</sup> /hr	
Stack Diameter at Port : 2.0 mtr			
Type of Fuel : MBF Gas (Coke)			
Period of Analysis : From 15-09-2024 to 17-09-2024			

## Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/ Products Tested : Stack Emission					
1.	Particulate Matter	mg/Nm <sup>3</sup>	30	14.1	IS 11255 (Part 1)
2.	Sulphur Dioxide (as SO <sub>2</sub> )	mg/Nm <sup>3</sup>	250	126.8	IS 11255 (Part 2)
3.	Sulphur Dioxide (as SO <sub>2</sub> )	kg/day	1620	295.7	IS 11255 (Part 2)
4.	Oxides of Nitrogen (as NO <sub>2</sub> )	mg/Nm <sup>3</sup>	200	112.9	IS 11255 (Part 7)
Note : 1. *indicates Consent No.: Format I.O/CAC/UAN No. MPCB-CONSENT-0900163341/CR/2307000707 Dtd. 13-07-2023. 2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.					
				Verified & Authorized by  (C.P. Jadhao) Quality Manager	

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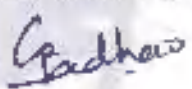
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Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Stack Emission Quality

Format No.: ELPL/QD4/TRD/7.8/S

Report No. : ELPL/09-24/48-B	Report Date: 18-09-2024
Name & Address of the Customer : M/s. SUNFLAG IRON & STEEL CO. LTD. Village - Eklari (Wardhi), Tal.- Mohadi, Dist.- Bhandara.	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Stack Emission	Sampling Location : S-11 MBF Stores
Sampling Ref Method : As Per Test Method	Environment Condition : Sunny (during sampling)
Sample Inward No. : ELPL/Sept-24/32/49/S-48	Sampled By : ELPL Representative
Sampling Date : 14-09-2024	
Sample Receipt Date : 14-09-2024	
Stack Height : 45.0 mtr	Temperature of Flue Gas : 147 °C
Stack Diameter at Port : 2.0 mtr	Velocity of Flue Gas : 12.45 m/sec
Type of Fuel : MBF Gas (Coke)	Flow Rate of Flue Gas : 97166.49 Nm <sup>3</sup> /hr
Period of Analysis : From 15-09-2024 to 18-09-2024	

## Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/ Products Tested : Stack Emission					
1.	Carbon Monoxide (as CO)	mg Nm <sup>3</sup>	-	BDL (< 0.1)	Multi Gas Analyzer Method USEPA OTM-39
Note : 1. *Indicates Consent No.: Format 1.0/CAC/UAN No. MPCB-CONSENT-0000163341/CR/2307000707 Dtd. 13-07-2023. 2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.					
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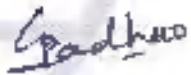
Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Stack Emission Quality

Format No.: ELPL/QD4/TRD/7.8/S

Report No. : ELPL/09-24/61-A	Report Date: 25-09-2024
Name & Address of the Customer : <b>M/s. SUNFLAG IRON &amp; STEEL CO. LTD.</b> Village - Eklari (Warhi), Tal.- Mohadi, Dist.- Bhandara.	
Ref.: Your Purchase Order No. 460002279 Dtd. 09-09-2023.	
Sample Type : Stack Emission	Sampling Location : S-11 MBF Stoves
Sampling Ref Method : As Per Test Method	Environment Condition : Sunny (during sampling)
Sample Inward No. : ELPL/Sept-24/32/64/S-61	
Sampling Date : 20-09-2024	Sampled By : ELPL Representative
Sample Receipt Date : 20-09-2024	
Stack Height : 45.0 mtr	Temperature of Flue Gas : 143 °C
Stack Diameter at Port : 2.0 mtr	Velocity of Flue Gas : 11.98 m/sec
Type of Fuel : MBF Gas (Coke)	Flow Rate of Flue Gas : 94407.59 Nm <sup>3</sup> /hr
Period of Analysis : From 21-09-2024 to 25-09-2024	

### Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/Products Tested : Stack Emission					
1.	Particulate Matter	mg/Nm <sup>3</sup>	30	13.1	IS 11255 (Part 1)
2.	Sulphur Dioxide (as SO <sub>2</sub> )	mg/Nm <sup>3</sup>	250	128.2	IS 11255 (Part 2)
3.	Sulphur Dioxide (as SO <sub>2</sub> )	kg/day	1620	290.5	IS 11255 (Part 2)
4.	Oxides of Nitrogen (as NO <sub>x</sub> )	mg/Nm <sup>3</sup>	200	112.2	IS 11255 (Part 7)
Note : 1. *indicates Consent No.: Format 1.0/CAC/UAN No. MPCB-CONSENT-0000163341/CR/2307000707 Dtd. 13-07-2023. 2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.					
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\*\* End of the Report \*\*



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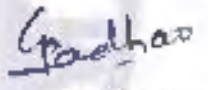
C-11, Amar Enclave Commercial Wing, Jog Layout, Prashant Nagar, Near Ajni Square, Nagpur - 440 016, Tel & Fax: (0712) 2251470, Cell: 9786616862  
Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Stack Emission Quality

Format No.: ELPL/QD4/TRD/7.2/S

Report No. : ELPL/09-24/61-B	Report Date: 25-09-2024
Name & Address of the Customer : M/a. SUNFLAG IRON & STEEL CO. LTD. Village - Eklari (Warhi), Tal.- Mohadi, Dist.- Bhandara.	
Ref.: Your Purchase Order No. 460002279 Dtd. 09-09-2023.	
Sample Type : Stack Emission	Sampling Location : S-11 MBF Stoves
Sampling Ref. Method : As Per Test Method	Environment Condition : Sunny (during sampling)
Sample Inward No. : ELPL/Sept-24/32/64/S-61	Sampled By : ELPL Representative
Sampling Date : 20-09-2024	
Sample Receipt Date : 20-09-2024	
Stack Height : 45.0 mtr	Temperature of Flue Gas : 143 °C
Stack Diameter at Port : 2.0 mtr	Velocity of Flue Gas : 11.98 m/sec
Type of Fuel : MBF Gas (Coke)	Flow Rate of Flue Gas : 94407.59 Nm <sup>3</sup> /hr
Period of Analysis : From 21-09-2024 to 25-09-2024	

## Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/ Products Tested : Stack Emission					
1.	Carbon Monoxide (as CO)	mg/Nm <sup>3</sup>	—	BDL (<0.1)	Multi Gas Analyzer Method USEPA OTM-39
Note : 1. *indicates Consent No.: Format 1.0/CAC/UAN No. MPCB-CONSENT-0000163341/CR/2307000707 Dtd. 13-07-2023. 2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.					
					Verified & Authorized by  (C.P. Jadhao) Quality Manager

\*\* End of the Report \*\*





TC-12331

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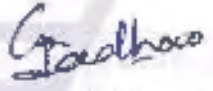
Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

**Test Report  
Stack Emission Quality**

Format No.: ELPL/QD4/TRD/7.8/S

Report No. : ELPL/09-24/91-A	Report Date: 02-10-2024
Name & Address of the Customer : M/s. SUNFLAG IRON & STEEL CO. LTD. Village - Eklari (Warthi), Tal.- Mohadi, Dist.- Bhandara.	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Stack Emission	Sampling Location : S-11 MBF Stoves
Sampling Ref Method : As Per Test Method	Environment Condition : Sunny (during sampling)
Sample Inward No. : ELPL/Sept-24/32/76/S-91	Sampled By : ELPL Representative
Sampling Date : 26-09-2024	
Sample Receipt Date : 26-09-2024	
Stack Height : 45.0 mtr	Temperature of Flue Gas : 142 °C
Stack Diameter at Port : 2.0 mtr	Velocity of Flue Gas : 12.78 m/sec
Type of Fuel : MBF Gas (Coke)	Flow Rate of Flue Gas : 100951.89 Nm <sup>3</sup> /hr
Period of Analysis : From 27-09-2024 to 02-10-2024	

**Results of Analysis**

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/Products Tested : Stack Emission					
1.	Particulate Matter	mg/Nm <sup>3</sup>	30	12.6	IS 11255 (Part 1)
2.	Sulphur Dioxide (as SO <sub>2</sub> )	mg/Nm <sup>3</sup>	250	123.6	IS 11255 (Part 2)
3.	Sulphur Dioxide (as SO <sub>2</sub> )	kg/day	1620	304.3	IS 11255 (Part 2)
4.	Oxides of Nitrogen (as NO <sub>2</sub> )	mg/Nm <sup>3</sup>	200	108.1	IS 11255 (Part 7)
Note : 1. *Indicates Consent No.: Format 1.0/CAC/UAN No. MPCB-CONSENT-0000163341/CR/2307006707 Dtd. 13-07-2023. 2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully without prior approval of ELPL.					
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\*\* End of the Report \*\*



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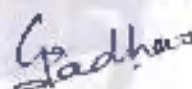
C-11, Amar Enclave Commercial Wing, Jog Layout, Prashant Nagar, Near Ajni Square, Nagpur - 440 015, Tel & Fax: (0712) 2251470, Cell: 9786816862  
Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Stack Emission Quality

Form No.: ELPL/ QD4/TRD/7.8/S

Report No. : ELPL/09-24/91-B	Report Date: 02-10-2024
Name & Address of the Customer : M/s. SUNFLAG IRON & STEEL CO. LTD. Village - Eklari (Warthi), Tal. - Mohadi, Dist. - Bhandara.	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Stack Emission	Sampling Location : S-11 MBF Stoves
Sampling Ref Method : As Per Test Method	Environment Condition : Sunny (during sampling)
Sample Inward No. : ELPL/Sept-24/32/76/S-91	Sampled By : ELPL Representative
Sampling Date : 26-09-2024	
Sample Receipt Date : 26-09-2024	
Stack Height : 45.0 mtr	Temperature of Flue Gas : 142 °C
Stack Diameter at Port : 2.0 mtr	Velocity of Flue Gas : 12.78 m/sec
Type of Fuel : MBF Gas (Coke)	Flow Rate of Flue Gas : 100951.89 Nm <sup>3</sup> /hr
Period of Analysis : From 27-09-2024 to 02-10-2024	

## Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/ Products Tested : Stack Emission					
1.	Carbon Monoxide (as CO)	mg/Nm <sup>3</sup>	--	BDL (< 0.1)	Multi Gas Analyzer Method USEPA OTM-39
Note :	1. *Indicates Consent No.: Format I.O/CAC/UAN No. MPCB-CONSENT-0000163341/CR/2307000707 Dtd. 13-07-2023. 2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.				
				Verified & Authorized by  (C.P. Jadhao) Quality Manager	

\*\* End of the Report \*\*





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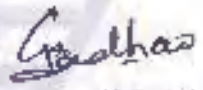
C-11, Amar Enclave Commercial Wing, Jog Layout, Prashanti Nagar, Near Ajni Square, Nagpur - 440 015, Tel & Fax: (0712) 2251470, Cell: 9788616862  
Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Stack Emission Quality

Format No.: ELPL/QD4/TRD/7.8/S

Report No. : ELPL/09-24/40-A	Report Date: 15-09-2024
Name & Address of the Customer : <b>M/s. SUNFLAG IRON &amp; STEEL CO. LTD.</b> Village - Eklari (Warhi), Tal.- Mohadi, Dist.- Bhandara.	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Stack Emission	Sampling Location : S-23 Head ESP (Slater Plant)
Sampling Ref Method : As Per Test Method	Environment Condition: Sunny (during sampling)
Sample Inward No. : ELPL/Sept-24/32/49/S-40	
Sampling Date : 11-09-2024	Sampled By : ELPL Representative
Sample Receipt Date : 12-09-2024	
Stack Height : 50.0 mtr	Temperature of Flue Gas : 162 °C
Stack Diameter at Port : 3.0 mtr	Velocity of Flue Gas : 14.72 m/sec
Type of Fuel : Coke Breeze & Fines	Flow Rate of Flue Gas : 249335.85 Nm <sup>3</sup> /hr
Period of Analysis : From 12-09-2024 to 15-09-2024	

### Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/Products Tested : Stack Emission					
1.	Particulate Matter	mg/Nm <sup>3</sup>	50	42.4	IS 11255 (Part 1)
2.	Sulphur Dioxide (as SO <sub>2</sub> )	mg/Nm <sup>3</sup>	500	30.4	IS 11255 (Part 2)
3.	Sulphur Dioxide (as SO <sub>2</sub> )	kg/day	272	181.9	IS 11255 (Part 2)
4.	Oxides of Nitrogen (as NO <sub>2</sub> )	mg/Nm <sup>3</sup>	500	95.3	IS 11255 (Part 7)
Note : 1. *Indicates Consent No.: Format I.O/CAC/UAN No. MPCB-CONSENT-0000163341/CR/2307000707 Dtd. 13-07-2023. 2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.					
					Verified & Authorized by  (C.P. Jadhao) Quality Manager



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Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Stack Emission Quality

Format No.: ELPL/QD4/TRD/7.8/S

Report No. : ELPL/09-24/62-A		Report Date: 24-09-2024	
Name & Address of the Customer : <b>M/s. SUNFLAG IRON &amp; STEEL CO. LTD.</b> Village - Eklari (Warhi), Tal.- Mohadi, Dist.- Bhandara.			
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.			
Sample Type : Stack Emission	Sampling Location : <b>S-23 Head ESP (Sinter Plant)</b>		
Sampling Ref Method : As Per Test Method	Environment Condition: Sunny (during sampling)		
Sample Inward No. : ELPL/Sept-24/32/64/S-62	Sampled By : ELPL Representative		
Sampling Date : 21-09-2024	Temperature of Flue Gas : 168 °C		
Sample Receipt Date : 21-09-2024	Velocity of Flue Gas : 15.58 m/sec		
Stack Height : 50.0 mtr	Flow Rate of Flue Gas : 260479.04 Nm <sup>3</sup> /hr		
Stack Diameter at Port : 3.0 mtr			
Type of Fuel : Coke Breeze & Fines			
Period of Analysis : From 22-09-2024 to 24-09-2024			

## Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/ Products Tested : Stack Emission					
1.	Particulate Matter	mg/Nm <sup>3</sup>	50	44.2	IS 11255 (Part 1)
2.	Sulphur Dioxide (as SO <sub>2</sub> )	mg/Nm <sup>3</sup>	500	24.4	IS 11255 (Part 2)
3.	Sulphur Dioxide (as SO <sub>2</sub> )	kg/day	272	152.6	IS 11255 (Part 2)
4.	Oxides of Nitrogen (as NO <sub>2</sub> )	mg/Nm <sup>3</sup>	500	36.3	IS 11255 (Part 7)
Note : 1. *Indicates Consent No.: Format 1,0/CAC/UAN No. MPCB-CONSENT-0000163341/CR/2307000707 Dtd. 13-07-2023. 2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.					
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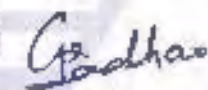
C-11, Amar Enclave Commercial Wing, Jag Layout, Preshant Nagar, Near Ajni Square, Nagpur - 440 015, Tel & Fax: (0712) 2251470, Cell: 9788816862  
Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Stack Emission Quality

Format No.: ELPL/QD4/TRD/7.8/S

Report No. : ELPL/09-24/92-A	Report Date: 30-09-2024
Name & Address of the Customer : M/s. SUNFLAG IRON & STEEL CO. LTD. Village - Eklari (Warthi), Tal. - Mohadi, Dist. - Bhandara.	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Stack Emission	Sampling Location : S-23 Head ESP (Sinter Plant)
Sampling Ref Method : As Per Test Method	Environment Condition: Sunny (during sampling)
Sample Inward No. : ELPL/Sept-24/32/76/S-92	
Sampling Date : 27-09-2024	Sampled By : ELPL Representative
Sample Receipt Date : 27-09-2024	
Stack Height : 50.0 mtr	Temperature of Flue Gas : 157 °C
Stack Diameter at Port : 3.0 mtr	Velocity of Flue Gas : 15.93 m/sec
Type of Fuel : Coke Breeze & Fines	Flow Rate of Flue Gas : 273173.28 Nm <sup>3</sup> /hr
Period of Analysis : From 28-09-2024 to 30-09-2024	

## Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/ Products Tested : Stack Emission					
1.	Particulate Matter	mg/Nm <sup>3</sup>	50	39.4	IS 11255 (Part 1)
2.	Sulphur Dioxide (as SO <sub>2</sub> )	mg/Nm <sup>3</sup>	500	21.1	IS 11255 (Part 2)
3.	Sulphur Dioxide (as SO <sub>2</sub> )	kg/day	272	138.6	IS 11255 (Part 2)
4.	Oxides of Nitrogen (as NO <sub>2</sub> )	mg/Nm <sup>3</sup>	500	80.5	IS 11255 (Part 7)
Note : 1. *Indicates Consent No.: Format I.O/CAC/UAN No. MPCB-CONSENT-0000163341/CR/2307000707 Dtd. 13-07-2023. 2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.					
					<div>  </div>
					<div>  </div>
					<div> (C.P. Jadhao) Quality Manager </div>

\*\* End of the Report \*\*



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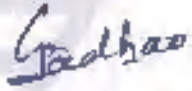
C-11, Amar Enclave Commercial Wing, Jog Layout, Prashant Nagar, Near Ajni Square, Nagpur - 440 015, Tel & Fax: (0712) 2251470, Cell: 9788816882  
Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Stack Emission Quality

Formal No.: ELPL/QM/TRD/7.8/S

Report No.: ELPL/09-24/41-A	Report Date: 15-09-2024
Name & Address of the Customer: M/s. SUNFLAG IRON & STEEL CO. LTD. Village - Eklari (Warhi), Tal.- Mohadi, Dist.- Bhandara.	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type: Stack Emission	Sampling Location: S-24 Tail ESP (Slater Plant)
Sampling Ref Method: As Per Test Method	Environment Condition: Sunny (during sampling)
Sample Inward No.: ELPL/Sept-24/32/49/S-41	
Sampling Date: 11-09-2024	Sampled By: ELPL Representative
Sample Receipt Date: 12-09-2024	
Stack Height: 40.0 mtr	Temperature of Flue Gas: 146 °C
Stack Diameter at Port: 2.38 mtr	Velocity of Flue Gas: 9.70 m/sec
Type of Fuel: Coke Breeze & Fines	Flow Rate of Flue Gas: 107553.46 Nm <sup>3</sup> /hr
Period of Analysis: From 12-09-2024 to 15-09-2024	

## Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline: Chemical, Group: Atmospheric Pollution, Materials/ Products Tested: Stack Emission					
1.	Particulate Matter	mg/Nm <sup>3</sup>	50	37.7	IS 11255 (Part 1)
2.	Sulphur Dioxide (as SO <sub>2</sub> )	mg/Nm <sup>3</sup>	500	21.1	IS 11255 (Part 2)
3.	Sulphur Dioxide (as SO <sub>2</sub> )	kg/day	92	54.2	IS 11255 (Part 2)
4.	Oxides of Nitrogen (as NO <sub>2</sub> )	mg/Nm <sup>3</sup>	500	80.1	IS 11255 (Part 7)
Note: 1. *Indicates Consent No.: Formal 1.0/CAC/UAN No. MPCB-CONSENT-0000163341/CR/2307000707 Dtd. 13-07-2023. 2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.					
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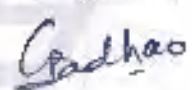
G-11, Amar Enclave Commercial Wing, Jog Layout, Prashant Nagar, Near Ajni Square, Nagpur - 440 015, Tel & Fax: (0712) 2251470, Cell: 9788616862  
Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Stack Emission Quality

Format No.: ELPL/QD4/TRD/7.6/S

Report No. : ELPL/09-24/63-A	Report Date: 24-09-2024
Name & Address of the Customer : M/s. SUNFLAG IRON & STEEL CO. LTD. Village - Eklari (Warhi), Tal.- Mohadi, Dist.- Bhandara.	
Ref: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Stack Emission	Sampling Location : S-24 Tall ESP (Sinter Plant)
Sampling Ref Method : As Per Test Method	Environment Condition: Sunny (during sampling)
Sample Inward No. : ELPL/Sept-24/32/64/S-63	Sampled By : ELPL Representative
Sampling Date : 21-09-2024	Temperature of Flue Gas : 154 °C
Sample Receipt Date : 21-09-2024	Velocity of Flue Gas : 10.22 m/sec
Stack Height : 40.0 mtr	Flow Rate of Flue Gas : 111193.12 Nm <sup>3</sup> /hr
Stack Diameter at Port : 2.38 mtr	
Type of Fuel : Coke Breeze & Fines	
Period of Analysis : From 22-09-2024 to 24-09-2024	

## Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/ Products Tested : Stack Emission					
1.	Particulate Matter	mg/Nm <sup>3</sup>	50	27.5	IS 11255 (Part 1)
2.	Sulphur Dioxide (as SO <sub>2</sub> )	mg/Nm <sup>3</sup>	500	21.3	IS 11255 (Part 2)
3.	Sulphur Dioxide (as SO <sub>2</sub> )	kg/day	92	56.7	IS 11255 (Part 2)
4.	Oxides of Nitrogen (as NO <sub>2</sub> )	mg/Nm <sup>3</sup>	500	70.7	IS 11255 (Part 7)
Note : 1. *Indicates Consent No.: Format L0/CAC/UAN No. MPCB-CONSENT-0000163341/CR/2307000707 Dtd. 13-07-2023. 2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.					
					Verified & Authorized by  (C.P. Jadhao) Quality Manager

\*\* End of the Report \*\*



TC-12331

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Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com**Test Report  
Stack Emission Quality**

Format No.: ELPL/QM/TRD/7.8/S

Report No. : ELPL/09-24/93-A		Report Date: 30-09-2024	
Name & Address of the Customer : M/s. SUNFLAG IRON & STEEL CO. LTD. Village - Ekharl (Warhi), Tal.- Mohadi, Dist.- Bhandara.			
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.			
Sample Type : Stack Emission		Sampling Location : S-24 Tail ESP (Sinter Plant)	
Sampling Ref Method : As Per Test Method		Environment Condition: Sunny (during sampling)	
Sample Inward No. : ELPL/Sept-24/32/76/S-93		Sampled By : ELPL Representative	
Sampling Date : 27-09-2024		Stack Height : 40.0 mtr	
Sample Receipt Date : 27-09-2024		Stack Diameter at Port : 2.38 mtr	
Type of Fuel : Coke Brex & Fines		Temperature of Flue Gas : 136 °C	
		Velocity of Flue Gas : 8.78 m/sec	
		Flow Rate of Flue Gas : 99728.72 Nm <sup>3</sup> /hr	
Period of Analysis : From 28-09-2024 to 30-09-2024			

**Results of Analysis**

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/ Products Tested : Stack Emission					
1.	Particulate Matter	mg/Nm <sup>3</sup>	50	28.4	IS 11255 (Part 1)
2.	Sulphur Dioxide (as SO <sub>2</sub> )	mg/Nm <sup>3</sup>	500	26.5	IS 11255 (Part 2)
3.	Sulphur Dioxide (as SO <sub>2</sub> )	kg/day	92	63.4	IS 11255 (Part 2)
4.	Oxides of Nitrogen (as NO <sub>2</sub> )	mg/Nm <sup>3</sup>	500	76.5	IS 11255 (Part 7)

Note : 1. \*Indicates Consent No.: Format I.O/CAC/UAN No. MPCB-CONSENT-000016334 LCR/2307000707 Dtd. 13-07-2023.  
2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.



Verified &amp; Authorized by

*C.P. Jadhao*(C.P. Jadhao)  
Quality Manager

\*\* End of the Report \*\*





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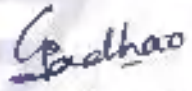
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Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Stack Emission Quality

Format No.: ELPL/QD4/TRIX.8/S

Report No. : ELPL/09-24/42-A	Report Date: 15-09-2024
Name & Address of the Customer : <b>M/s. SUNFLAG IRON &amp; STEEL CO. LTD.</b> Village - Eklari (Wardhi), Tal.- Mohadi, Dist.- Bhandara.	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Stack Emission	Sampling Location : S-25 PS-15 Tail Stack (Sinter Plant)
Sampling Ref Method : As Per Test Method	Environment Condition: Sunny (during sampling)
Sample Inward No. : ELPL/Sept-24/32/49/S-42	Sampled By : ELPL Representative
Sampling Date : 11-09-2024	Temperature of Flue Gas : 116 °C
Sample Receipt Date : 12-09-2024	Velocity of Flue Gas : 7.39 m/sec
Stack Height : 40.0 mtr	Flow Rate of Flue Gas : 87484.84 Nm <sup>3</sup> /hr
Stack Diameter at Port : 2.37 mtr	
Type of Fuel : Coke Breeze & Fines	
Period of Analysis : From 12-09-2024 to 15-09-2024	

### Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/ Products Tested : Stack Emission					
1.	Particulate Matter	mg/Nm <sup>3</sup>	50	32.7	IS 11255 (Part 1)
2.	Sulphur Dioxide (as SO <sub>2</sub> )	mg/Nm <sup>3</sup>	300	59.5	IS 11255 (Part 2)
3.	Sulphur Dioxide (as SO <sub>2</sub> )	kg/day	184	124.8	IS 11255 (Part 2)
4.	Oxides of Nitrogen (as NO <sub>2</sub> )	mg/Nm <sup>3</sup>	500	119.1	IS 11255 (Part 7)
Note : 1. *Indicates Consent No.: Format1.0/CAC/UAN No. MPCB-CONSENT-0000163341/CR/2307000707 Dtd. 13-07-2023. 2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.					
					Verified & Authorized by  (C.P. Jadhao) Quality Manager

• • End of the Report • •



# EARTHCARE LABS PRIVATE LIMITED

Environmental Laboratory & Consultancy Organization

(NABL, OGI Accredited, ISO/IEC 17025 Recognized, ISO 9001, ISO 14001 & OHSAS 45001 Certified)

C-11, Amar Enclave Commercial Wing, Jog Layout, Prashant Nagar, Near Ajni Square, Nagpur - 440 016, Tel & Fax: (0712) 2251470, Cell: 9788616862  
Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Stack Emission Quality

Form No.: ELPL/QD4/TRD/7.8/S

Report No.: ELPL/09-24/64-A		Report Date: 24-09-2024	
Name & Address of the Customer: M/s. SUNFLAG IRON & STEEL CO. LTD. Village - Eklari (Warhi), Tal.- Mohadi, Dist.- Bhandara.			
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.			
Sample Type	: Stack Emission	Sampling Location	: S-25 PS-15 Tall Stack (Sinter Plant)
Sampling Ref Method	: As Per Test Method	Environment Condition	: Sunny (during sampling)
Sample Inward No.	: ELPL/Sept-24/32/64/S-64	Sampled By	: ELPL Representative
Sampling Date	: 21-09-2024	Stack Height	: 40.0 mtr
Sample Receipt Date	: 21-09-2024	Stack Diameter at Port	: 2.37 mtr
Type of Fuel	: Coke Breeze & Fines	Temperature of Flue Gas	: 119 °C
		Velocity of Flue Gas	: 7.09 m/sec
		Flow Rate of Flue Gas	: 83287.63 Nm <sup>3</sup> /hr
Period of Analysis : From 22-09-2024 to 24-09-2024			

### Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/Products Tested : Stack Emission					
1.	Particulate Matter	mg/Nm <sup>3</sup>	50	28.5	IS 11255 (Part 1)
2.	Sulphur Dioxide (as SO <sub>2</sub> )	mg/Nm <sup>3</sup>	500	65.8	IS 11255 (Part 2)
3.	Sulphur Dioxide (as SO <sub>2</sub> )	kg/day	184	131.5	IS 11255 (Part 2)
4.	Oxides of Nitrogen (as NO <sub>2</sub> )	mg/Nm <sup>3</sup>	500	126.4	IS 11255 (Part 7)

Note : 1. \*Indicates Consent No.: Form 1.0/CAC/UAN No. MPCB-CONSENT-0000163341/CR/2307000707 Dtd. 13-07-2023.  
2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.



Verified & Authorized by

*C.P. Jadhao*

(C.P. Jadhao)  
Quality Manager

\*\* End of the Report \*\*





TC-12391

**EARTHCARE LABS PRIVATE LIMITED****Environmental Laboratory & Consultancy Organization**

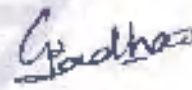
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C-11, Amar Enclave Commercial Wing, Jog Layout, Prashant Nagar, Near Ajni Square, Nagpur - 440 016, Tel & Fax: (0712) 2251470, Cell: 9788616852  
Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com**Test Report  
Stack Emission Quality**

Format No.: ELPL/QD4/TRD/7.8/S

Report No. : ELPL/09-24/94-A	Report Date: 30-09-2024
Name & Address of the Customer : M/s. SUNFLAG IRON & STEEL CO. LTD. Village - Eklari (Warhi), Tal - Mohadi, Dist - Bhandara.	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Stack Emission	Sampling Location : S-25 PS-15 Tail Stack (Slater Plant)
Sampling Ref Method : As Per Test Method	Environment Condition: Sunny (during sampling)
Sample Inward No. : ELPL/Sept-24/32/76/S-94	Sampled By : ELPL Representative
Sampling Date : 27-09-2024	
Sample Receipt Date : 27-09-2024	
Stack Height : 40.0 mtr	Temperature of Flue Gas : 112 °C
Stack Diameter at Port : 2.37 mtr	Velocity of Flue Gas : 7.14 m/sec
Type of Fuel : Coke Breeze & Fines	Flow Rate of Flue Gas : 85402.30 Nm <sup>3</sup> /hr
Period of Analysis : From 28-09-2024 to 30-09-2024	

**Results of Analysis**

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/Products Tested : Stack Emission					
1.	Particulate Matter	mg/Nm <sup>3</sup>	50	30.2	IS 11255 (Part 1)
2.	Sulphur Dioxide (as SO <sub>2</sub> )	mg/Nm <sup>3</sup>	500	59.5	IS 11255 (Part 2)
3.	Sulphur Dioxide (as SO <sub>2</sub> )	kg/day	184	121.8	IS 11255 (Part 2)
4.	Oxides of Nitrogen (as NO <sub>x</sub> )	mg/Nm <sup>3</sup>	500	121.3	IS 11255 (Part 7)
Note : 1. *Indicates Consent No.: Format I.O/CAC/UAN No. MPCB-CONSENT-0000163341/CR/2307000707 Dtd. 13-07-2023. 2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.					
					Verified & Authorized by  (C.P. Jadhao) Quality Manager

\*\* End of the Report \*\*



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Environmental Laboratory & Consultancy Organization

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Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

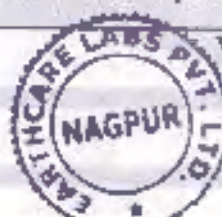
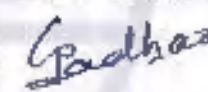
## Test Report

Format No.: ELPL/QD4/TRD/7.8/8

### Stack Emission Quality

Report No. : ELPL/09-24/44-A	Report Date: 15-09-2024
Name & Address of the Customer : M/s. SUNFLAG IRON & STEEL CO. LTD. Village - Eklari (Warhi), Tal- Mohadi, Dist.- Bhandara.	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Stack Emission	Sampling Location : S-27 Flux Crusher De-Dusting System (Sinter Plant)
Sampling Ref Method : As Per Test Method	Environment Condition: Sunny (during sampling)
Sample Inward No. : ELPL/Sept-24/32/49/S-44	
Sampling Date : 12-09-2024	Sampled By : ELPL Representative
Sample Receipt Date : 12-09-2024	
Stack Height : 15 mtr	Temperature of Flue Gas : 38 °C
Stack Diameter at Port : 1.1 mtr	Velocity of Flue Gas : 4.87 m/sec
	Flow Rate of Flue Gas : 15534.89 Nm <sup>3</sup> /hr
Period of Analysis : From 13-09-2024 to 15-09-2024	

### Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/ Products Tested : Stack Emission					
1.	Particulate Matter	mg/Nm <sup>3</sup>	50	8.56	IS 11255 (Part 1)
Note : 1. *Indicates Consent No.: Formal I.O/CAC/UAN No. MPCB-CONSENT-0000163341/CR/2307000707 Dtd. 13-07-2023. 2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.					
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\*\* End of the Report \*\*





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C-11, Amar Enclave Commercial Wing, Jog Layout, Prashant Nagar, Near Ajni Square, Nagpur - 440 015, Tel & Fax: (0712) 2251470, Call: 9786816862  
Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Stack Emission Quality

Format No.: ELPL/QD4/TRD/7.8/S

Report No. : ELPL/09-24/97-A	Report Date: 02-10-2024
Name & Address of the Customer : M/s. SUNFLAG IRON & STEEL CO. LTD. Village - Eklari (Warthi), Tal.- Mohadi, Dist.- Bhandara.	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Stack Emission	Sampling Location : S-27 Flux Crusher De-Dusting System (Sinter Plant)
Sampling Ref Method : As Per Test Method	Environment Condition: Sunny (during sampling)
Sample Inward No. : ELPL/Sept-24/32/76/S-97	
Sampling Date : 28-09-2024	Sampled By : ELPL Representative
Sample Receipt Date : 28-09-2024	
Stack Height : 15 mtr	Temperature of Flue Gas : 41 °C
Stack Diameter at Port : 1.1 mtr	Velocity of Flue Gas : 4.62 m/sec
	Flow Rate of Flue Gas : 14597.19 Nm <sup>3</sup> /hr
Period of Analysis : From 30-09-2024 to 02-10-2024	

## Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/Products Tested : Stack Emission					
1.	Particulate Matter	mg/Nm <sup>3</sup>	50	7.25	IS 11255 (Part 1)
Note : 1. *Indicates Consent No.: Format I.O/CAC/UAN No. MPCB-CONSENT-0000163341/CR/2307000707 Dtd. 13-07-2023. 2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.					
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\*\* End of the Report \*\*



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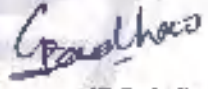
C-11, Amar Endeava Commercial Wing, Jog Layout, Prashant Nagar, Near Ajni Square, Nagpur - 440 016, Tel & Fax: (0712) 2261470, Cell: 9786618862  
Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Stack Emission Quality

Format No.: ELPL/QM4/TRD/7.8/S

Report No. : ELPL/09-24/43-A	Report Date: 15-09-2024
Name & Address of the Customer : M/s. SUNFLAG IRON & STEEL CO. LTD. Village - Eklari (Warthi), Tal.- Mohadi, Dist.- Bhandara.	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Stack Emission Sampling Ref Method : As Per Test Method Sample Inward No. : ELPL/Sept-24/32/49/S-43	Sampling Location : S-28 Flux Screening Quickling Bunker Top De-Dusting System (Sinter Plant) Environment Condition: Sunny (during sampling)
Sampling Date : 12-09-2024 Sample Receipt Date : 12-09-2024	Sampled By : ELPL Representative
Stack Height : 20 mtr Stack Diameter at Port : 1.1 mtr	Temperature of Flue Gas : 48 °C Velocity of Flue Gas : 6.31 m/sec Flow Rate of Flue Gas : 19506.05 Nm <sup>3</sup> /hr
Period of Analysis : From 13-09-2024 to 15-09-2024	

### Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/ Products Tested : Stack Emission					
1.	Particulate Matter	mg/Nm <sup>3</sup>	50	13.6	IS 11255 (Part 1)
Note : 1. *indicates Consent No.: Format1.0/CAC/UAN No. MPCB-CONSENT-000916334/UCR/2307008707 Dtd. 13-07-2023. 2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.					
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\*\* End of the Report \*\*





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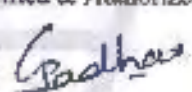
C-11, Amar Enclave Commercial Wing, Jog Layout, Prashant Nagar, Near Ajni Square, Nagpur - 440 015, Tel & Fax: (0712) 2251470, Cell: 9788616862  
Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Stack Emission Quality

Form No.: ELPL/QD4/TRD/7.8/S

Report No. : ELPL/09-24/96-A	Report Date: 02-10-2024
Name & Address of the Customer : M/s. SUNFLAG IRON & STEEL CO. LTD. Village - Eklari (Warhi), Tal. - Mohadi, Dist. - Bhandara.	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Stack Emission Sampling Ref Method : As Per Test Method Sample Inward No. : ELPL/Sept-24/32/76/S-96	Sampling Location : S-28 Flux Screening Quickling Banker Top De-Dusting System (Sinter Plant) Environment Condition: Sunny (during sampling)
Sampling Date : 28-09-2024 Sample Receipt Date : 28-09-2024	Sampled By : ELPL Representative
Stack Height : 20 mtr Stack Diameter at Port : 1.1 mtr	Temperature of Flue Gas : 46 °C Velocity of Flue Gas : 5.98 m/sec Flow Rate of Flue Gas : 18601.33 Nm <sup>3</sup> /hr
Period of Analysis : From 30-09-2024 to 02-10-2024	

## Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/ Products Tested : Stack Emission					
1.	Particulate Matter	mg/Nm <sup>3</sup>	50	19.2	IS 11255 (Part I)
Note : 1. *Indicates Consent No.: Format1.0/CAC/UAN No. MPCB-CONSENT-0000163341/CR/2307000707 Dtd. 13-07-2023. 2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.					
				Verified & Authorized by  (C.P. Jadhao) Quality Manager	

\*\* End of the Report \*\*



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Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Stack Emission Quality

Format No.: ELPL/ QD4/TRD/7.8/S

Report No.: ELPL/09-24/06-A		Report Date: 08-09-2024	
Name & Address of the Customer : M/s. SUNFLAG IRON & STEEL CO. LTD. Village - Eklari (Warhi), Tal.- Mohadi, Dist.- Bhandara.			
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.			
Sample Type : Stack Emission		Sampling Location : S-29 ESP to New WHRSG of K&N (DRP- 2)	
Sampling Ref Method : As Per Test Method		Environment Condition: Sunny (during sampling)	
Sample Inward No. : ELPL/Sept-24/32/17/S-06		Sampled By : ELPL Representative	
Sampling Date : 05-09-2024		Temperature of Flue Gas : 142 °C	
Sample Receipt Date : 05-09-2024		Velocity of Flue Gas : 9.30 m/sec	
Stack Height : 60.0 mtr		Flow Rate of Flue Gas : 144029.61 Nm <sup>3</sup> /hr	
Stack Diameter at Port : 2.8 mtr			
Type of Fuel : Coal			
Period of Analysis : From 06-09-2024 to 08-09-2024			

### Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/ Products Tested : Stack Emission					
1.	Particulate Matter	mg/Nm <sup>3</sup>	50	39.6	IS 11255 (Part 1)
2.	Sulphur Dioxide (as SO <sub>2</sub> )	mg/Nm <sup>3</sup>	—	293.1	IS 11255 (Part 2)
3.	Sulphur Dioxide (as SO <sub>2</sub> )	kg/day	4520	1013.1	IS 11255 (Part 2)
4.	Oxides of Nitrogen (as NO <sub>2</sub> )	mg/Nm <sup>3</sup>	—	228.9	IS 11255 (Part 7)

Note : 1. \*Indicates Consent No.: Format 1.0/CAC/UAN No. MPCB-CONSENT-000016334/LCR/2307000707 Dtd. 13-07-2023.  
2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.



Verified & Authorized by

*C.P. Jadhao*

(C.P. Jadhao)  
Quality Manager

\*\*\* End of the Report \*\*\*





# EARTHCARE LABS PRIVATE LIMITED

Environmental Laboratory & Consultancy Organization

(ISO 9001:2015, ISO 14001:2015 & OHSAS 18001:2007 Certified)

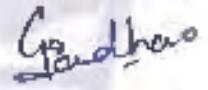
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Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Stack Emission Quality

Formal No.: ELPL/QD4/TRD/7.8/S

Report No. : ELPL/09-24/06-B	Report Date: 08-09-2024
Name & Address of the Customer : M/s. SUNFLAG IRON & STEEL CO. LTD. Village - Eklari (Warhi), Tal.- Mohadi, Dist.- Bhandara.	
Ref.: Your Purchase Order No. 460002279 Dtd. 09-09-2023.	
Sample Type : Stack Emission	Sampling Location : S-29 ESP to New WHRSG of Kila (DRP- 2)
Sampling Ref Method : As Per Test Method	Environment Condition: Sunny (during sampling)
Sample Inward No. : ELPL/Sept-24/32/17/S-06	Sampled By : ELPL Representative
Sampling Date : 05-09-2024	Temperature of Flue Gas : 142 °C
Sample Receipt Date : 05-09-2024	Velocity of Flue Gas : 9.30 m/sec
Stack Height : 60.0 mtr	Flow Rate of Flue Gas : 144029.61 Nm <sup>3</sup> /hr
Stack Diameter at Port : 2.8 mtr	
Type of Fuel : Coal	
Period of Analysis : From 06-09-2024 to 08-09-2024	

### Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/Products Tested : Stack Emission					
1.	Carbon Monoxide (as CO)	mg/Nm <sup>3</sup>	—	BDL (<0.1)	Multi Gas Analyzer Method USEPA OTM-39
Note : 1. *Indicates Consent No.: Formal I.O./CAC/UAN No. MPCB-CONSENT-0000163341/CR/2307000567 Dtd. 13-07-2023. 2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.					
				Verified & Authorized by  (C.P. Jadhao) Quality Manager	

\*\* End of the Report \*\*



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Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Stack Emission Quality

Format No.: ELPL/QD4/TRD/7.8/S

Report No. : ELPL/09-24/56-A	Report Date: 22-09-2024
Name & Address of the Customer : M/s. SUNFLAG IRON & STEEL CO. LTD. Village - Eklari (Warhi), Tal.- Mohadi, Dist.- Bhandara.	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Stack Emission Sampling Ref Method : As Per Test Method Sample Inward No. : ELPL/Sept-24/32/64/S-56	Sampling Location : S-29 ESP to New WHRSG of Kila (DRP- 2) Environment Condition: Sunny (during sampling)
Sampling Date : 18-09-2024 Sample Receipt Date : 18-09-2024	Sampled By : ELPL Representative
Stack Height : 60.0 mtr Stack Diameter at Port : 2.8 mtr Type of Fuel : Coal	Temperature of Flue Gas : 147 °C Velocity of Flue Gas : 8.80 m/sec Flow Rate of Flue Gas : 134667.27 Nm <sup>3</sup> /hr
Period of Analysis : From 19-09-2024 to 22-09-2024	

## Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/ Products Tested : Stack Emission					
1.	Particulate Matter	mg/Nm <sup>3</sup>	50	37.4	IS 11255 (Part 1)
2.	Sulphur Dioxide (as SO <sub>2</sub> )	mg/Nm <sup>3</sup>	--	311.1	IS 11255 (Part 2)
3.	Sulphur Dioxide (as SO <sub>2</sub> )	kg/day	4520	1005.3	IS 11255 (Part 2)
4.	Oxides of Nitrogen (as NO <sub>2</sub> )	mg/Nm <sup>3</sup>	--	225.9	IS 11255 (Part 7)

Note : 1. \*Indicates Consent No.: Format1.0/CAC/UAN No. MPCB-CONSENT-0000163341/CR/2307000707 Dtd. 13-07-2023.  
2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.



Verified & Authorized by

*C. P. Jadhao*

(C.P. Jadhao)  
Quality Manager

\*\* End of the Report \*\*





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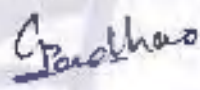
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Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Stack Emission Quality

Format No.: ELPL/QD4/TRD/7.8/8

Report No. : ELPL/09-24/56-B	Report Date: 22-09-2024
Name & Address of the Customer : M/s. SUNFLAG IRON & STEEL CO. LTD. Village - Eklari (Warhi), Tal. - Mohadi, Dist. - Bhandara.	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Stack Emission	Sampling Location : S-29 ESP to New WHRSG of Kiln (DRP- 2)
Sampling Ref Method : As Per Test Method	Environment Condition: Sunny (during sampling)
Sample Inward No. : ELPL/Sept-24/32/64/S-56	Sampled By : ELPL Representative
Sampling Date : 18-09-2024	Temperature of Flue Gas : 147 °C
Sample Receipt Date : 18-09-2024	Velocity of Flue Gas : 8.80 m/sec
Stack Height : 60.0 mtr	Flow Rate of Flue Gas : 134667.27 Nm <sup>3</sup> /hr
Stack Diameter at Port : 2.8 mtr	
Type of Fuel : Coal	
Period of Analysis : From 19-09-2024 to 22-09-2024	

## Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/Products Tested : Stack Emission					
1.	Carbon Monoxide (as CO)	mg/Nm <sup>3</sup>	--	BDL (< 0.1)	Multi Gas Analyser Method USEPA OTM-39
Note : 1. *Indicates Consent No.: Format1.0/CAC/1/AN No. MPCB-CONSENT-0000163341/CR/2307000707 Dtd. 13-07-2023. 2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully without prior approval of ELPL.					
				Verified & Authorized by  (C.P. Jadhao) Quality Manager	

\*\* End of the Report \*\*



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Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Stack Emission Quality

Format No.: ELPL/QD/TRD/7.8/S

Report No. : ELPL/09-24/88-A	Report Date: 28-09-2024
Name & Address of the Customer : M/s. SUNFLAG IRON & STEEL CO. LTD. Village - Eklari (Warhi), Tal.- Mohadi, Dist.- Bhandara.	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Stack Emission Sampling Ref Method : As Per Test Method Sample Inward No. : ELPL/Sept-24/32/76/S-88	Sampling Location : S-29 ESP to New WHRSG of Kila (DRP-2) Environment Condition: Sunny (during sampling)
Sampling Date : 25-09-2024 Sample Receipt Date : 25-09-2024	Sampled By : ELPL Representative
Stack Height : 60.0 mtr Stack Diameter at Port : 2.5 mtr Type of Fuel : Coal	Temperature of Flue Gas : 143 °C Velocity of Flue Gas : 8.37 m/sec Flow Rate of Flue Gas : 129316.80 Nm <sup>3</sup> /hr
Period of Analysis : From 26-09-2024 to 28-09-2024	

## Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/ Products Tested : Stack Emission					
1.	Particulate Matter	mg/Nm <sup>3</sup>	30	35.6	IS 11255 (Part 1)
2.	Sulphur Dioxide (as SO <sub>2</sub> )	mg/Nm <sup>3</sup>	--	316.1	IS 11255 (Part 2)
3.	Sulphur Dioxide (as SO <sub>2</sub> )	kg/day	4520	980.9	IS 11255 (Part 2)
4.	Oxides of Nitrogen (as NO <sub>2</sub> )	mg/Nm <sup>3</sup>	--	230.5	IS 11255 (Part 7)

Note : 1. \*Indicates Consent No.: Form-1, D/CAC/UAN No. MPOB-CONSENT-0000163341/CR/2307000707 Dtd. 13-07-2023.  
2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.



Verified & Authorized by

*G. P. Jadhao*

(C.P. Jadhao)  
Quality Manager

\*\* End of the Report \*\*





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Environmental Laboratory & Consultancy Organization

(ISO/IEC 17025:2017, ISO 9001:2015 & ISO 14001:2015 Certified)

C-11, Amar Enclave Commercial Wing, Jog Layout, Prashant Nagar, Near Ajni Square, Nagpur - 440 015. Tel & Fax: (0712) 2251470, Cell: 9766816882  
Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Stack Emission Quality

Format No.: ELPL/QD4/TRD/7.8/S

Report No. : ELPL/09-24/88-B	Report Date: 28-09-2024
Name & Address of the Customer : M/s. SUNFLAG IRON & STEEL CO. LTD. Village - Eklari (Warhi), Tal. - Mohadi, Dist. - Bhandara.	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Stack Emission Sampling Ref Method : As Per Test Method Sample Inward No. : ELPL/Sept-24/32/76/S-88	Sampling Location : S-29 ESP to New WHRSG of Kiln (DRP- 2) Environment Condition: Sunny (during sampling)
Sampling Date : 25-09-2024 Sample Receipt Date : 25-09-2024	Sampled By : ELPL Representative
Stack Height : 60.0 mtr Stack Diameter at Port : 2.8 mtr Type of Fuel : Coal	Temperature of Flue Gas : 143 °C Velocity of Flue Gas : 8.37 m/sec Flow Rate of Flue Gas : 129316.80 Nm <sup>3</sup> /hr
Period of Analysis : From 26-09-2024 to 28-09-2024	

## Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/Products Tested : Stack Emission					
1.	Carbon Monoxide (as CO)	mg/Nm <sup>3</sup>	—	BDL (< 0.1)	Multi Gas Analyzer Method USEPA OTM-39
Note : 1. *Indicates Consent No.: Format I.0/CAC/UAN No. MPCB-CONSENT-0000163341/CR/2307000707 Dtd. 13-07-2023. 2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.					
					Verified & Authorized by  (C.P. Jadhao) Quality Manager

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## Test Report

### Stack Emission Quality

Format No.: ELPL/QD4/TRD/7.8/S

Report No. : ELPL/09-24/07-A		Report Date: 08-09-2024	
Name & Address of the Customer : <b>M/s. SUNFLAG IRON &amp; STEEL CO. LTD.</b> Village - Eklari (Warthi), Tal.- Mohadi, Dist.- Bhandara.			
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.			
Sample Type : Stack Emission	Sampling Location : S-34 Producer Hopper (DRP - 2)		
Sampling Ref. Method : As Per Test Method	Environment Condition: Sunny (during sampling)		
Sample Inward No. : ELPL/Sept-24/32/17/S-07	Sampled By : ELPL Representative		
Sampling Date : 05-09-2024	Temperature of Flue Gas : 52 °C		
Sample Receipt Date : 05-09-2024	Velocity of Flue Gas : 17.07 m/sec		
Stack Height : 30.0 mtr	Flow Rate of Flue Gas : 53152.12 Nm <sup>3</sup> /hr		
Stack Diameter at Port : 1.11 mtr			
Type of Fuel : NA			
Period of Analysis : From 06-09-2024 to 08-09-2024			

## Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/ Products Tested : Stack Emission					
1.	Particulate Matter	mg/Nm <sup>3</sup>	50	37.1	IS 11253 (Part 1)
Note : 1. *Indicates Consent No.: Format L.6/CAC/AN No. MPCB-CONSENT-0000163341/CR/2307000707 Dtd. 13-07-2023. 2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.					
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TC-12331

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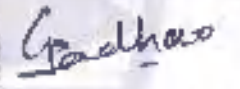
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C-11, Amar Enclave Commercial Wing, Jog Layout, Prashant Nagar, Near Ajni Square, Nagpur - 440 015, Tel & Fax: (0712) 2251470, Cell: 9766616882  
Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com**Test Report  
Stack Emission Quality**

Format No.: ELPL/QD4/TRD/7.8/S

Report No. : ELPL/09-24/57-A	Report Date: 22-09-2024
Name & Address of the Customer : M/s. SUNFLAG IRON & STEEL CO. LTD. Village - Eklari (Warhi), Tal. - Mohadi, Dist. - Bhandara.	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Stack Emission	Sampling Location : S-34 Producer Hopper (DRP - 2)
Sampling Ref Method : As Per Test Method	Environment Condition: Sunny (during sampling)
Sample Inward No. : ELPL/Sept-24/32/64/S-57	Sampled By : ELPL Representative
Sampling Date : 18-09-2024	
Sample Receipt Date : 18-09-2024	
Stack Height : 30.0 mtr	Temperature of Flue Gas : 56 °C
Stack Diameter at Port : 1.11 mtr	Velocity of Flue Gas : 16.56 m/sec
Type of Fuel : NA	Flow Rate of Flue Gas : 50925.50 Nm <sup>3</sup> /hr
Period of Analysis : From 19-09-2024 to 22-09-2024	

**Results of Analysis**

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/ Products Tested : Stack Emission					
1.	Particulate Matter	mg/Nm <sup>3</sup>	50	40.5	IS 11255 (Part 1)
Note : 1. *Indicates Consent No.: Format 1.0/CAC/UAN No. MPCB-CONSENT-0000163341/CR/23/07000707 Dtd. 13-07-2023. 2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.					
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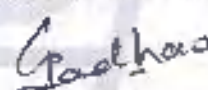
C-11, Amar Enclave Commercial Wing, Jog Layout, Prashant Nagar, Near Ajni Square, Nagpur - 440 015, Tel & Fax: (0712) 2251470, Cell: 9786616862  
Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Stack Emission Quality

Format No.: ELPL/QD4/TRD/7.8/S

Report No. : ELPL/09-24/89-A	Report Date: 28-09-2024
Name & Address of the Customer : M/s. SUNFLAG IRON & STEEL CO. LTD. Village - Eklari (Warthi), Tal.- Mohadi, Dist.- Bhandara,	
Ref.: Your Purchase Order No. 460002279 Dtd. 09-09-2023.	
Sample Type : Stack Emission	Sampling Location : S-34 Producer Hopper (DRP - 2)
Sampling Ref Method : As Per Test Method	Environment Condition: Sunny (during sampling)
Sample Inward No. : ELPL/Sept-24/32/76/S-89	Sampled By : ELPL Representative
Sampling Date : 25-09-2024	
Sample Receipt Date : 25-09-2024	
Stack Height : 30.0 mtr	Temperature of Flue Gas : 54 °C
Stack Diameter at Port : 1.11 mtr	Velocity of Flue Gas : 17.50 m/sec
Type of Fuel : NA	Flow Rate of Flue Gas : 54163.62 Nm <sup>3</sup> /hr
Period of Analysis : From 25-09-2024 to 28-09-2024	

## Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/ Products Tested : Stack Emission					
1.	Particulate Matter	mg/Nm <sup>3</sup>	50	38.5	IS 11255 (Part 1)
Note : 1. *Indicates Consent No.: Format 1.0/CACU/AN No. MPCB-CONSENT-0000169341/CR/2307000707 Dtd. 13-07-2023. 2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.					
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\*\* End of the Report \*\*





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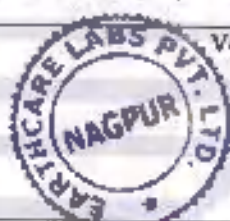
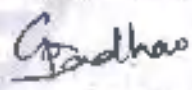
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Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Stack Emission Quality

Format No.: ELPL/QD4/TRD/7.8/S

Report No. : ELPL/09-24/02-A	Report Date: 07-09-2024
Name & Address of the Customer : M/s. SUNFLAG IRON & STEEL CO. LTD. Village - Eklari (Warhi), Tal.- Mohadi, Dist.- Bhandara.	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Stack Emission	Sampling Location : S-35 Reheating Furnace (Blooming Mill)
Sampling Ref Method : As Per Test Method	Environment Condition : Sunny (during sampling)
Sample Inward No. : ELPL/Sept-24/32/17S-02	
Sampling Date : 02-09-2024	Sampled By : ELPL Representative
Sample Receipt Date : 03-09-2024	
Stack Height : 70.0 mtr	Temperature of Flue Gas : 321 °C
Stack Diameter at Port : 2.0 mtr	Velocity of Flue Gas : 9.86 m/sec
Type of Fuel : LSHS/Furnace Oil	Flow Rate of Flue Gas : 54543.51 Nm <sup>3</sup> /hr
Period of Analysis : From 03-09-2024 to 07-09-2024	

### Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/Products Tested : Stack Emission					
1.	Particulate Matter	mg/Nm <sup>3</sup>	50	25.8	IS 11255 (Part 1)
2.	Sulphur Dioxide (as SO <sub>2</sub> )	mg/Nm <sup>3</sup>	300	194.4	IS 11255 (Part 2)
3.	Sulphur Dioxide (as SO <sub>2</sub> )	kg/day	5490	254.5	IS 11255 (Part 2)
4.	Oxides of Nitrogen (as NO <sub>2</sub> )	mg/Nm <sup>3</sup>	400	164.6	IS 11255 (Part 7)
Note : 1. *Indicates Consent No.: Format I/O/CACUAN No. MPCB-CONSENT-0000163341/CR/2307000707 Dtd. 13-07-2023. 2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.					
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\*\* End of the Report \*\*



TC-12331

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Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com**Test Report  
Stack Emission Quality**

Format No.: ELPL/QD4/TRD/7.8/5

Report No. : ELPL/09-24/39-A	Report Date: 15-09-2024
Name & Address of the Customer : M/s. SUNFLAG IRON & STEEL CO. LTD. Village - Eklari (Warhi), Tal.- Mohadi, Dist.- Bhandara.	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Stack Emission	Sampling Location : S-35 Reheating Furnace (Blooming Mill)
Sampling Ref Method : As Per Test Method	Environment Condition: Sunny (during sampling)
Sample Inward No. : ELPL/Sept-24/32/49/S-39	Sampled By : ELPL Representative
Sampling Date : 09-09-2024	
Sample Receipt Date : 10-09-2024	
Stack Height : 70.0 mtr	Temperature of Flue Gas : 312 °C
Stack Diameter at Port : 2.0 mtr	Velocity of Flue Gas : 8.66 m/sec
Type of Fuel : LSHS/Furnace Oil	Flow Rate of Flue Gas : 48545.86 Nm <sup>3</sup> /hr
Period of Analysis : From 10-09-2024 to 15-09-2024	

**Results of Analysis**

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/ Products Tested : Stack Emission					
1.	Particulate Matter	mg/Nm <sup>3</sup>	50	30.4	IS 11255 (Part 1)
2.	Sulphur Dioxide (as SO <sub>2</sub> )	mg/Nm <sup>3</sup>	300	216.3	IS 11255 (Part 2)
3.	Sulphur Dioxide (as SO <sub>2</sub> )	kg/day	5490	252.1	IS 11255 (Part 2)
4.	Oxides of Nitrogen (as NO <sub>2</sub> )	mg/Nm <sup>3</sup>	400	167.3	IS 11255 (Part 7)
Note : 1. *Indicates Consent No.: Format I.0/CAC/UAN No. MPCB-CONSENT-0000163341/CB/2307000707 Dtd. 13-07-2023. 2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.					
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\*\* End of the Report \*\*





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Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Stack Emission Quality

Format No.: ELPL/ QD4/TRD/7.8/S

Report No. : ELPL/09-24/58-A	Report Date: 22-09-2024
Name & Address of the Customer : M/s. SUNFLAG IRON & STEEL CO. LTD, Village - Ekharl (Warthi), Tal.- Mohadi, Dist.- Bhandara.	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Stack Emission	Sampling Location : S-35 Reheating Furnace (Blooming Mill)
Sampling Ref Method : As Per Test Method	Environment Condition: Sunny (during sampling)
Sample Inward No. : ELPL/Sept-24/32/64/S-58	
Sampling Date : 19-09-2024	Sampled By : ELPL Representative
Sample Receipt Date : 19-09-2024	
Stack Height : 70.0 mtr	Temperature of Flue Gas : 318 °C
Stack Diameter at Port : 2.0 mtr	Velocity of Flue Gas : 9.49 m/sec
Type of Fuel : LSHS/Furnace Oil	Flow Rate of Flue Gas : 52660.69 Nm <sup>3</sup> /hr
Period of Analysis : From 20-09-2024 to 22-09-2024	

## Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/ Products Tested : Stack Emission					
1.	Particulate Matter	mg/Nm <sup>3</sup>	50	27.2	IS 11255 (Part 1)
2.	Sulphur Dioxide (as SO <sub>2</sub> )	mg/Nm <sup>3</sup>	300	205.4	IS 11255 (Part 2)
3.	Sulphur Dioxide (as SO <sub>2</sub> )	kg/day	5490	259.6	IS 11255 (Part 2)
4.	Oxides of Nitrogen (as NO <sub>2</sub> )	mg/Nm <sup>3</sup>	400	175.1	IS 11255 (Part 7)

Note : 1. \*Indicates Consent No.: Format L.O/CAC/UAN No. MPCB-CONSENT-0000163341/CR/2307000707 Dtd. 13-07-2023.  
2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.



Verified & Authorized by

*C.P. Jadhao*

(C.P. Jadhao)  
Quality Manager

\*\* End of the Report \*\*



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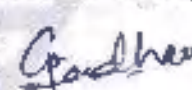
C-11, Amar Enclave Commercial Wing, Jog Layout, Prashant Nagar, Near Ajni Square, Nagpur - 440 015, Tel & Fax: (0712) 2251470, Cels: 9766616662  
Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Stack Emission Quality

Formal No.: ELPL/QM/TRD/7.8/S

Report No. : ELPL/09-24/86-A	Report Date: 28-09-2024
Name & Address of the Customer : <b>M/s. SUNFLAG IRON &amp; STEEL CO. LTD.</b> Village - Eklari (Warhi), Tal- Mohadi, Dist.- Bhandara.	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Stack Emission	Sampling Location : S-35 Reheating Furnace (Blooming Mill)
Sampling Ref Method : As Per Test Method	Environment Condition: Sunny (during sampling)
Sample Inward No. : ELPL/Sept-24/32/76/S-85	
Sampling Date : 24-09-2024	Sampled By : ELPL Representative
Sample Receipt Date : 24-09-2024	
Stack Height : 70.0 mtr	Temperature of Flue Gas : 328 °C
Stack Diameter at Port : 2.0 mtr	Velocity of Flue Gas : 8.50 m/sec
Type of Fuel : LSHS/Pinnacle Oil	Flow Rate of Flue Gas : 46381.67 Nm <sup>3</sup> /hr
Period of Analysis : From 25-09-2024 to 28-09-2024	

## Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/ Products Tested : Stack Emission					
1.	Particulate Matter	mg/Nm <sup>3</sup>	50	22.3	IS 11255 (Part 1)
2.	Sulphur Dioxide (as SO <sub>2</sub> )	mg/Nm <sup>3</sup>	300	211.9	IS 11255 (Part 2)
3.	Sulphur Dioxide (as SO <sub>2</sub> )	kg/day	5490	235.9	IS 11255 (Part 2)
4.	Oxides of Nitrogen (as NO <sub>2</sub> )	mg/Nm <sup>3</sup>	400	181.7	IS 11255 (Part 7)
Note : 1. *indicates Consent No.: Format L0/CAC/UAN No. MPCB-CONSENT-0000163341/CR/2307000707 Dtd. 13-07-2023. 2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully without prior approval of ELPL.					
					Verified & Authorized by  (C.P. Jadhao) Quality Manager

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Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Stack Emission Quality

Form No.: ELPL/ QD4/TRD/7.8/8

Report No. : ELPL/09-24/09-A	Report Date: 10-09-2024
Name & Address of the Customer : M/s. SUNFLAG IRON & STEEL CO. LTD. Village - Eklari (Warhi), Tal.- Mohadi, Dist.- Bhandara.	
Ref.: Your Purchase Order No. 4700155098 Dtd. 01-09-2022.	
Sample Type : Stack Emission	Sampling Location : S-39 Reheating Furnace ( PS-12 )
Sampling Ref Method : As Per Test Method	Environment Condition: Sunny (during sampling)
Sample Inward No. : ELPL/Sept-24/32/17/S-09	
Sampling Date : 06-09-2024	Sampled By : ELPL Representative
Sample Receipt Date : 07-09-2024	
Stack Height : 35.0 mtr	Temperature of Flue Gas : 102 °C
Stack Diameter at Port : 3.3 mtr	Velocity of Flue Gas : 6.37 m/sec
Type of Fuel : Furnace Oil	Flow Rate of Flue Gas : 151663.59 Nm <sup>3</sup> /hr
Period of Analysis : From 07-09-2024 to 10-09-2024	

## Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/ Products Tested : Stack Emission					
1.	Particulate Matter	mg/Nm <sup>3</sup>	50	21.4	IS 11255 (Part 1)
2.	Sulphur Dioxide (as SO <sub>2</sub> )	mg/Nm <sup>3</sup>	300	150.2	IS 11255 (Part 2)
3.	Sulphur Dioxide (as SO <sub>2</sub> )	kg/day	720	546.6	IS 11255 (Part 2)
4.	Oxides of Nitrogen (as NO <sub>2</sub> )	mg/Nm <sup>3</sup>	400	168.3	IS 11255 (Part 7)

Note : 1. \*Indicates Consent No. Formant 1.0/CAC/UAN No. MPCB-CONSENT-0000163341/CR/2307000707 Dtd. 13-07-2023.  
2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.



Verified & Authorized by

*C. P. Jadhao*

(C.P. Jadhao)  
Quality Manager

\*\* End of the Report \*\*



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Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Stack Emission Quality

Format No.: ELPL/QDA/TRD/7.8/3

Report No. : ELPL/09-24/10-A	Report Date: 10-09-2024
Name & Address of the Customer : M/s. SUNFLAG IRON & STEEL CO. LTD. Village - Ekhar (Warhi), Tal. - Mohadi, Dist. - Bhandara.	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Stack Emission Sampling Ref Method : As Per Test Method Sample Inward No. : ELPL/Sept-24/32/17/S-10	Sampling Location : S-40 MBF Stock House De-Dusting System Environment Condition: Sunny (during sampling)
Sampling Date : 07-09-2024 Sample Receipt Date : 08-09-2024	Sampled By : ELPL Representative
Stack Height : 30.0 mtr Stack Diameter at Port : 1.0 mtr Type of Fuel : Not Applicable	Temperature of Flue Gas : 47 °C Velocity of Flue Gas : 18.73 m/sec Flow Rate of Flue Gas : 48103.13 Nm <sup>3</sup> /hr
Period of Analysis : From 08-09-2024 to 10-09-2024	

## Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/ Products Tested : Stack Emission					
1.	Particulate Matter	mg/Nm <sup>3</sup>	30	13.3	IS 11255 (Part 1)
Note : 1. *Indicates Consent No.: Format 1.0/CAC/UAN No. MPCB-CONSENT-0000163341/CR/2307000707 Dtd. 13-07-2023. 2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.					
				Verified & Authorized by  (C.P. Jadhao) Quality Manager	

\*\* End of the Report \*\*





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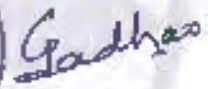
C-11, Amar Enclave Commercial Wing, Jog Layout, Prashant Nagar, Near Ajni Square, Nagpur - 440 015, Tel & Fax: (0712) 2251470. Cell: 9766816862  
Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Stack Emission Quality

Format No.: ELPL/QD4/TRD/7.8/S

Report No. : ELPL/09-24/95-A	Report Date: 02-10-2024
Name & Address of the Customer : M/s. SUNFLAG IRON & STEEL CO. LTD. Village - Eklari (Warhi), Tal.- Mohadi, Dist.- Bhandara.	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Stack Emission	Sampling Location : S-40 MBF Stock House De-Dusting System
Sampling Ref Method : As Per Test Method	Environment Condition: Sunny (during sampling)
Sample Inward No. : ELPL/Sept-24/32/76/S-95	Sampled By : ELPL Representative
Sampling Date : 26-09-2024	
Sample Receipt Date : 28-09-2024	
Stack Height : 30.0 mtr	Temperature of Flue Gas : 51 °C
Stack Diameter at Port : 1.0 mtr	Velocity of Flue Gas : 17.72 m/sec
Type of Fuel : Not Applicable	Flow Rate of Flue Gas : 44943.73 Nm <sup>3</sup> /hr
Period of Analysis : From 30-09-2024 to 02-10-2024	

### Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/ Products Tested : Stack Emission					
1.	Particulate Matter	mg/Nm <sup>3</sup>	30	11.3	IS 11255 (Part 1)
Note : 1. *Indicates Consent No.: Format I, D/CAC/UAN No. MPCB-CONSENT-0000163341/CR/2307000707 Dtd. 13-07-2023. 2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.					
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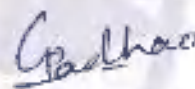
## Test Report

Format No.: ELPL/QD4/TRD/7.8/WAS

### Fugitive Emission

Report No. : ELPL/09-24/01-B	Report Date : 10-09-2024
Name & Address of the Customer : M/s. SUNFLAG IRON & STEEL CO. LTD., Village - Eklari (Warhi), Tal.- Mohadi, Dist.- Bhandara.	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Fugitive Emission	Sampling Location : Sinter (Near Main Control Room Building)
Sampling Ref. Method : As Per Test Method	Environment Condition: Sunny (during sampling)
Sample Inward No. : ELPL/Sept-24/32/17/WAS-01	Sampled By: ELPL Representative
Sampling Date : 07-09-2024	
Sample Receipt Date : 07-09-2024	
Period of Analysis : From 08-09-2024 to 10-09-2024	

### Results of Analysis

Sr. No.	Test Parameters	Unit	Norms	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/ Products Tested : Fugitive Emission					
1.	Suspended Particulate Matter (SPM)	$\mu\text{g}/\text{m}^3$	2000	1384.3	SOP No.AAS-13/Issue No.01/Feb 19, based on IS 5182 (Part 23):2006 RA 2017
2.	Respirable Suspended Particulate Matter (RSPM)	$\mu\text{g}/\text{m}^3$	—	492.5	IS 5182 (Part 23): 2006 RA 2017
Note : Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.					
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Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Fugitive Emission

Formet No.: ELPL/ QM4/TRD/7.8/WAS

Report No. : ELPL/09-24/02-B	Report Date : 10-09-2024
Name & Address of the Customer : M/s. SUNFLAG IRON & STEEL CO. LTD., Village - Eklari (Wardhi), Tal- Mohadi, Dist.- Bhandara	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Fugitive Emission	Sampling Location : Raw Material Handling Area (Near Transfer Point)
Sampling Ref Method : As Per Test Method	Environment Condition: Sunny (during sampling)
Sample Inward No. : ELPL/Sept-24/32/17/WAS-02	Sampled By : ELPL Representative
Sampling Date : 07-09-2024	
Sample Receipt Date : 07-09-2024	
Period of Analysis : From 08-09-2024 to 10-09-2024	

## Results of Analysis

Sr. No.	Test Parameters	Unit	Norms	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/ Products Tested : Fugitive Emission					
1.	Suspended Particulate Matter (SPM)	$\mu\text{g}/\text{m}^3$	3000	1294.8	SOP No.AAS-13/Issue No.01/Feb 19 , based on IS 5182 (Part 23):2006 RA 2017
2.	Respirable Suspended Particulate Matter (RSPM)	$\mu\text{g}/\text{m}^3$	—	451.1	IS 5182 (Part 23): 2006 RA 2017
Note : Test results relates to sample collected & tested only for the selected parameters . It shall not be reproduced partially or fully Without prior approval of ELPL.					
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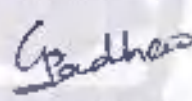
C-11, Ambar Enclave Commercial Wing, Jog Layout, Prashant Nagar, Near Ajni Square, Nagpur - 440 015, Tel & Fax: (0712) 2251470, Cell: 9766616682  
Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Fugitive Emission

Form No.: ELPL/QD4/TRD/7.5/WAS

Report No. : ELPL/09-24/09-B	Report Date : 17-09-2024
Name & Address of the Customer : M/s. SUNFLAG IRON & STEEL CO. LTD., Village - Eklari (Warhi), Tal.- Mohadi, Dist.- Bhandara.	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Fugitive Emission	Sampling Location : MBF (Near Mini Blast Furnace)
Sampling Ref Method : As Per Test Method	Environment Condition: Sunny (during sampling)
Sample Inward No. : ELPL/Sept-24/32/49/WAS-09	
Sampling Date : 14-09-2024	Sampled By: ELPL Representative
Sample Receipt Date : 14-09-2024	
Period of Analysis : From 15-09-2024 to 17-09-2024	

## Results of Analysis

Sr. No.	Test Parameters	Unit	Norms	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/ Products Tested : Fugitive Emission					
1.	Suspended Particulate Matter (SPM)	$\mu\text{g}/\text{m}^3$	2000	1204.7	SOP No.AAS-13/Issue No.01/Feb 19, based on IS 5182 (Part 23):2006 RA 2017
2.	Respirable Suspended Particulate Matter (RSPM)	$\mu\text{g}/\text{m}^3$	--	402.7	IS 5182 (Part 23): 2006 RA 2017
Note : Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.					
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Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com


## Test Report

### Fugitive Emission

Format No.: ELPL/QD4/TRD/7.8/WAS

Report No. : ELPL/09-24/10-B	Report Date : 18-09-2024
Name & Address of the Customer : M/s. SUNFLAG IRON & STEEL CO. LTD., Village - Eklari (Warhi), Tal. - Mohadi, Dist. - Bhandara.	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Fugitive Emission	Sampling Location : SMS (Steel Melting Shop) (Near Ladle Heating Furnace)
Sampling Ref Method : As Per Test Method	Environment Condition: Sunny (during sampling)
Sample Inward No. : ELPL/Sept-24/32/49/WAS-10	Sampled By: ELPL Representative
Sampling Date : 14-09-2024	
Sample Receipt Date : 14-09-2024	
Period of Analysis : From 15-09-2024 to 18-09-2024	

## Results of Analysis

Sr. No.	Test Parameters	Unit	Norms	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/ Products Tested : Fugitive Emission					
1.	Suspended Particulate Matter (SPM)	$\mu\text{g}/\text{m}^3$	2000	1489.3	SOP No.AAS-13/Issue No.01/Feb 19, based on IS 5182 (Part 23):2006 RA 2017
2.	Respirable Suspended Particulate Matter (RSPM)	$\mu\text{g}/\text{m}^3$	--	602.6	IS 5182 (Part 23): 2006 RA 2017
Note : Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.					
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Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Fugitive Emission

Format No.: ELPL/QD4/TRD/7.8/WAS

Report No. : ELPL/09-24/35-B	Report Date : 23-09-2024
Name & Address of the Customer : M/s. SUNFLAG IRON & STEEL CO. LTD., Village - Bklari (Warhi), Tal.- Mohadi, Dist.- Bhandara.	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023,	
Sample Type : Fugitive Emission	Sampling Location : DRP-2 (Near Coal Circuit Area)
Sampling Ref Method : As Per Test Method	Environment Condition: Sunny (during sampling)
Sample Inward No. : ELPL/Sept-24/32/64/WAS-35	
Sampling Date : 21-09-2024	Sampled By: ELPL Representative
Sample Receipt Date : 22-09-2024	
Period of Analysis : From 22-09-2024 to 23-09-2024	

## Results of Analysis

Sr. No.	Test Parameters	Unit	Norms	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/ Products Tested : Fugitive Emission					
1.	Suspended Particulate Matter (SPM)	$\mu\text{g}/\text{m}^3$	2000	584.8	SOP No.AAS-13/Issue No.01/Feb 19, based on IS 5182 (Part 23):2006 RA 2017
2.	Respirable Suspended Particulate Matter (RSPM)	$\mu\text{g}/\text{m}^3$	-	232.8	IS 5182 (Part 23): 2006 RA 2017

Note : Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.



Verified & Authorized by

*Gadhe*

(C.P. Jadhoo)  
Quality Manager

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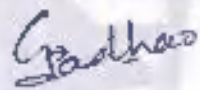
## Test Report

### Fugitive Emission

Format No.: ELPL/QD4/TRD/7.8/WAS

Report No. : ELPL/09-24/36-B	Report Date : 25-09-2024
Name & Address of the Customer : M/s. SUNFLAG IRON & STEEL CO. LTD., Village - Ekleri (Warhi), Tal - Mohadi, Dist - Bhandara.	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Fugitive Emission	Sampling Location : Raw Material Feed Area (Near Mixing Area)
Sampling Ref Method : As Per Test Method	Environment Condition: Sunny (during sampling)
Sample Inward No. : ELPL/Sept-24/32/64/WAS-36	Sampled By: ELPL Representative
Sampling Date : 21-09-2024	
Sample Receipt Date : 22-09-2024	
Period of Analysis : From 22-09-2024 to 25-09-2024	

## Results of Analysis

Sr. No.	Test Parameters	Unit	Norms	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/ Products Tested : Fugitive Emission					
1.	Suspended Particulate Matter (SPM)	$\mu\text{g}/\text{m}^3$	2000	1214.5	SOP No.AAS-13/Issue No.01/Feb 19, based on IS 5182 (Part 23):2006 RA 2017
2.	Respirable Suspended Particulate Matter (RSPM)	$\mu\text{g}/\text{m}^3$	—	424.5	IS 5182 (Part 23): 2006 RA 2017
Note : Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.					
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Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Ambient Noise Quality

Format No.: ELPL/QD4/TRD/7.8/AN

Report No.: ELPL/09-24/04-A	Report Date: 10-09-2024
Name & Address of the Customer: M/s. SUNFLAG IRON & STEEL CO. LTD. Village - Eklari (Warhi), Tal. - Mohadi, Dist. - Bhandara	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Ambient Noise	Sampling Location : NI- Eklari Gate
Sampling Ref Method : IS 9989	Environment Condition : Sunny (during sampling)
Sample Inward No. : ELPL/Sept-24/32/17/AN-04	
Sampling Date : 07-09-2024	Sampled by : ELPL Representative
Location (Type) : Industrial / Commercial / Residential / Silence	

## Results of Measurements

Test Parameter	During Day Time (Hrly Avg)	During Night Time (Hrly Avg)
Discipline : Chemical, Group: Atmospheric Pollution, Materials/Products Tested : Ambient Noise		
Equivalent Sound Level Leq dB (A)	69.1	57.3
Norms*	Industrial Area	70
	Commercial Area	55
	Residential Area	45
	Silence Zone	40

Note : 1. \*Indicates Rule 4 of Noise Pollution (Regulation & Control) Amendment Rules, 2000 (S.O. 1046 (E) dtd 22-11-2000)  
2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or Fully Without prior approval of ELPL.



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*Gadha*

(C.P. Jadhao)  
Quality Manager

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Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Ambient Noise Quality

Format No.: ELPL/QD4/TRD/7.8/AN

Report No.: ELPL/09-24/29-A	Report Date: 16-09-2024
Name & Address of the Customer: M/s. SUNFLAG IRON & STEEL CO. LTD. Village - Eklari (Warhi), Tal. - Mohadi, Dist. - Bhandara	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Ambient Noise	Sampling Location : NI- Eklari Gate
Sampling Ref Method : IS 9989	Environment Condition : Sunny (during sampling)
Sample Inward No.: ELPL/Sept-24/32/49/AN-29	
Sampling Date : 14-09-2024	Sampled by : ELPL Representative
Location (Type) : Industrial / Commercial / Residential / Silence	

## Results of Measurements

Test Parameter	During Day Time (Hrly Avg)	During Night Time (Hrly Avg)
Discipline : Chemical, Group: Atmospheric Pollution, Materials/Products Tested : Ambient Noise		
Equivalent Sound Level Leq dB (A)	63.8	58.9
Norms*	Industrial Area	70
	Commercial Area	55
	Residential Area	45
	Silence Zone	40

Note : 1. \*Indicates Rule 4 of Noise Pollution (Regulation & Control) Amendment Rules, 2000 (S.O. 1046 (E) dtd 22-11-2000)  
2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or Fully Without prior approval of ELPL.



Verified & Authorized by

*G. P. Jadhao*

(C.P. Jadhao)  
Quality Manager

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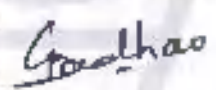
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Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Ambient Noise Quality

Formal No.: ELPL/QD4/TRD/7.8/AN

Report No.: ELPL/09-24/55-A	Report Date: 25-09-2024
Name & Address of the Customer: <b>M/s. SUNFLAG IRON &amp; STEEL CO. LTD.</b> Village - Eklari (Warhi), Tal.- Mohadi, Dist.- Bhandara	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Ambient Noise	Sampling Location : N1- Eklari Gate
Sampling Ref Method : IS 9989	Environment Condition : Sunny (during sampling)
Sample Inward No. : ELPL/Sept-24/32/64/AN-55	
Sampling Date : 21-09-2024	Sampled by : ELPL Representative
Location (Type) : Industrial / Commercial / Residential / Silence	

### Results of Measurements

Test Parameter		During Day Time (Hrly Avg)	During Night Time (Hrly Avg)
Discipline : Chemical, Group: Atmospheric Pollution, Materials/Products Tested : Ambient Noise			
Equivalent Sound Level Leq dB (A)		65.3	59.2
Norms*	Industrial Area	75	70
	Commercial Area	65	55
	Residential Area	55	45
	Silence Zone	50	40
Note : 1. *Indicates Rule 4 of Noise Pollution (Regulation & Control) Amendment Rules, 2000 (S.O. 1046 (E) dtd 22-11-2000 2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or Fully Without prior approval of ELPL.			
		Verified & Authorized by  (C.P. Jadhao) Quality Manager	



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## Test Report Ambient Noise Quality

Form No.: ELPL/QD4/TRD/7.8/AN

Report No. : ELPL/09-24/66-A	Report Date : 01-10-2024
Name & Address of the Customer: <b>M/s. SUNFLAG IRON &amp; STEEL CO. LTD.</b> Village - Eklari (Warthi), Tal.- Mohadi, Dist.- Bhandara	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Ambient Noise	Sampling Location : N1- Eklari Gate
Sampling Ref Method : IS 9989	Environment Condition : Sunny (during sampling)
Sample Inward No. : ELPL/Sept-24/32/76/AN-66	
Sampling Date : 28-09-2024	Sampled by : ELPL Representative
Location (Type) : Industrial / Commercial / Residential / Silence	

### Results of Measurements

Test Parameter	During Day Time (Hrly Avg)	During Night Time (Hrly Avg)
Discipline : Chemical, Group: Atmospheric Pollution, Materials/Products Tested : Ambient Noise		
Equivalent Sound Level Leq dB (A)	63.4	53.7
Norms*	Industrial Area	75
	Commercial Area	65
	Residential Area	55
	Silence Zone	50

Note : 1. \*Indicates Rule 4 of Noise Pollution (Regulation & Control) Amendment Rules, 2000 (S.O. 1046 (E) dtd 22-11-2000)

2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or Fully Without prior approval of ELPL.



Verified & Authorized by

*C.P. Jadhao*

(C.P. Jadhao)  
Quality Manager

\*\* End of the Report \*\*





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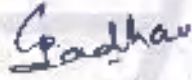
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Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Ambient Noise Quality

Format No.: ELPL/QD4/TRD/7.8/AN

Report No. : ELPL/09-24/05-A	Report Date : 10-09-2024
Name & Address of the Customer: <b>M/s. SUNFLAG IRON &amp; STEEL CO. LTD.</b> Village - Eklari (Warhi), Tal.- Mohadi, Dist.- Bhandara	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Ambient Noise	Sampling Location : N2 - Pump House -2 (Near Water Reservoir)
Sampling Ref Method : IS 9989	Environment Condition : Sunny (during sampling)
Sample Inward No. : ELPL/Sept-24/32/17/AN-05	Sampled by : ELPL Representative
Sampling Date : 07-09-2024	
Location (Type) : Industrial / Commercial / Residential / Silence	

### Results of Measurements

Test Parameter		During Day Time (Hrly Avg)	During Night Time (Hrly Avg)
Discipline : Chemical, Group: Atmospheric Pollution, Materials/Products Tested : Ambient Noise			
Equivalent Sound Level Leq dB (A)		72.1	62.7
Norms*	Industrial Area	75	70
	Commercial Area	65	55
	Residential Area	55	45
	Silence Zone	50	40
Note : 1. *Indicates Rule 4 of Noise Pollution (Regulation & Control) Amendment Rules, 2000 (S.O. 1046 (E) dtd 22-11-2000 2. Test results relates to sample collected & tested only for the selected parameters . It shall not be reproduced partially or Fully Without prior approval of ELPL.			
		Verified & Authorized by  (C.P. Jadhav) Quality Manager	



\*\* End of the Report \*\*



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Environmental Laboratory & Consultancy Organization

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C-11, Amar Enclave Commercial Wing, Jog Layout, Prashant Nagar, Near Ajni Square, Nagpur - 440 015. Tel & Fax: (0712) 2251470, Cell: 9788618882  
Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Ambient Noise Quality

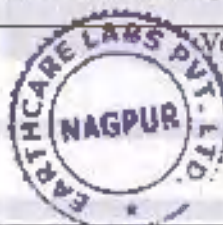
Form No.: ELPL/ QD4/TRD/7.2/AN

Report No. : ELPL/09-24/30-A	Report Date : 16-09-2024
Name & Address of the Customer: M/s. SUNFLAG IRON & STEEL CO. LTD. Village - Eklari (Warhi), Tal - Mahadi, Dist - Bhandara	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Ambient Noise Sampling Ref Method : IS 9989 Sample Inward No. : ELPL/Sept-24/32/49/AN-30	Sampling Location : N2 - Pump House -2 (Near Water Reservoir) Environment Condition : Sunny (during sampling)
Sampling Date : 14-09-2024	Sampled by : ELPL Representative
Location (Type) : Industrial / Commercial / Residential / Silence	

### Results of Measurements

Test Parameter		During Day Time (Hrly Avg)	During Night Time (Hrly Avg)
Discipline : Chemical, Group: Atmospheric Pollution, Materials/Products Tested : Ambient Noise			
Equivalent Sound Level Leq dB (A)		70.8	60.5
Norma*	Industrial Area	75	70
	Commercial Area	65	55
	Residential Area	55	45
	Silence Zone	50	40

Note : 1. \*Indicates Rule 4 of Noise Pollution (Regulation & Control) Amendment Rules, 2000 (S.O. 1046 (E) dtd 22-11-2000)  
2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or Fully Without prior approval of ELPL.



Verified & Authorized by

*C.P. Jadhao*

(C.P. Jadhao)  
Quality Manager

\*\* End of the Report \*\*





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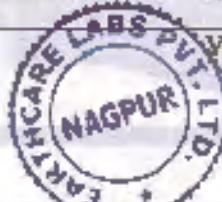

C-11, Amer Enclave Commercial Wing, Jog Layout, Prashant Nagar, Near Ajni Square, Nagpur - 440 015, Tel & Fax: (0712) 2251470, Cell: 9766616882  
Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Ambient Noise Quality

Format No.: ELPL/QD4/TRD/7.8/AN

Report No. : ELPL/09-24/56-A	Report Date : 25-09-2024
Name & Address of the Customer: M/s. SUNFLAG IRON & STEEL CO. LTD. Village - Eklari (Warhi), Tal.- Mohadi, Dist.- Bhandara	
Ref.: Your Purchase Order No. 460002279 Dtd. 09-09-2023.	
Sample Type : Ambient Noise	Sampling Location : N2 - Pump House -2 (Near Water Reservoir)
Sampling Ref Method : IS 9989	Environment Condition : Sunny (during sampling)
Sample Inward No. : ELPL/Sept-24/32/64/AN-56	
Sampling Date : 21-09-2024	Sampled by : ELPL Representative
Location (Type) : Industrial / Commercial / Residential / Silence	

### Results of Measurements

Test Parameter		During Day Time (Hrly Avg)	During Night Time (Hrly Avg)
Discipline : Chemical, Group: Atmospheric Pollution, Materials/Products Tested : Ambient Noise			
Equivalent Sound Level Leq dB (A)		71.8	61.7
Norms*	Industrial Area	75	70
	Commercial Area	65	55
	Residential Area	55	45
	Silence Zone	50	40
Note : 1. *Indicates Rule 4 of Noise Pollution (Regulation & Control) Amendment Rules, 2000 (S.O. 1046 (E) dtd 22-11-2000 2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or Fully Without prior approval of ELPL.			
		 Verified & Authorized by  (C.P. Jadhao) Quality Manager	

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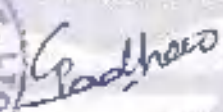
C-11, Amar Enclave Commercial Wing, Jog Layout, Prashant Nagar, Near Ajni Square, Nagpur - 440 015, Tel & Fax: (0712) 2251470, Cell: 9786816882  
Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Ambient Noise Quality

Form No.: ELPL/QD4/TRD/7.5/AN

Report No. : ELPL/09-24/67-A	Report Date : 01-10-2024
Name & Address of the Customer: <b>M/s. SUNFLAG IRON &amp; STEEL CO. LTD.</b> Village - Eklari (Warthi), Tal.- Mohadi, Dist.- Bhandara	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Ambient Noise	Sampling Location : N2 - Pump House -2 (Near Water Reservoir)
Sampling Ref Method : IS 9989	Environment Condition : Sunny (during sampling)
Sample Inward No. : ELPL/Sept-24/32/76/AN-67	Sampled by : ELPL Representative
Sampling Date : 28-09-2024	
Location (Type) : Industrial / Commercial / Residential / Silence	

### Results of Measurements

Test Parameter	During Day Time (Hrly Avg)	During Night Time (Hrly Avg)
Discipline : Chemical, Group: Atmospheric Pollution, Materials/Products Tested : Ambient Noise		
Equivalent Sound Level Leq dB (A)	72.4	63.4
Norms*	Industrial Area	70
	Commercial Area	55
	Residential Area	45
	Silence Zone	40
Note : 1. *Indicates Rule 4 of Noise Pollution (Regulation & Control) Amendment Rules, 2000 (S.O. 1046 (E) dtd 22-11-2000) 2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or Fully Without prior approval of ELPL.		
		Verified & Authorized by  (C.P. Jadhao) Quality Manager

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TC-12331

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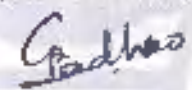
PMEL QCI Accredited, ISO/IEC 17025 Recognized, ISO 9001, ISO 14001 &amp; OHSAS 18001 Certified

G-11, Amar Enclave Commercial Wing, Jog Layout, Prashant Nagar, Near Ajni Square, Nagpur - 440 015, Tel & Fax: (0712) 2251470, Cell: 9789616852  
Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com**Test Report  
Ambient Noise Quality**

Format No.: ELPL/QD4/TRD/7.8/AN

Report No.: ELPL/09-24/06-A		Report Date: 10-09-2024	
Name & Address of the Customer: M/s. SUNFLAG IRON & STEEL CO. LTD. Village - Eklari (Warhi), Tal - Mohadi, Dist - Bhandara			
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.			
Sample Type : Ambient Noise		Sampling Location : N3 - STP	
Sampling Ref Method : IS 9989		Environment Condition : Sunny (during sampling)	
Sample Inward No. : ELPL/Sept-24/32/17/AN-06			
Sampling Date : 07-09-2024		Sampled by : ELPL Representative	
Location (Type) : Industrial / Commercial / Residential / Silence			

**Results of Measurements**

Test Parameter		During Day Time (Hrly Avg)	During Night Time (Hrly Avg)
Discipline : Chemical, Group: Atmospheric Pollution, Materials/Products Tested : Ambient Noise			
Equivalent Sound Level Leq dB (A)		51.2	46.5
Norms*	Industrial Area	75	70
	Commercial Area	65	55
	Residential Area	55	45
	Silence Zone	50	40
Note : 1. *Indicates Rule 4 of Noise Pollution (Regulation & Control) Amendment Rules, 2000 (S.O. 1046 (E) dtd 22-11-2000 2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or Fully Without prior approval of ELPL.			
		Verified & Authorized by  (C.P. Jadhao) Quality Manager	

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Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Ambient Noise Quality

Format No.: ELPL/QD4/TRD/7.8/AN

Report No.: ELPL/09-24/31-A	Report Date: 16-09-2024
Name & Address of the Customer: <b>M/s. SUNFLAG IRON &amp; STEEL CO. LTD.</b> Village - Eklari (Warhi), Tal.- Mohadi, Dist.- Bhandara	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Ambient Noise	Sampling Location: N3 - STP
Sampling Ref Method: IS 9989	Environment Condition: Sunny (during sampling)
Sample Inward No.: ELPL/Sept-24/32/49/AN-31	
Sampling Date: 14-09-2024	Sampled by: ELPL Representative
Location (Type): Industrial / Commercial / <del>Residential</del> Silence	

### Results of Measurements

Test Parameter	During Day Time (Hrly Avg)	During Night Time (Hrly Avg)
<b>Discipline: Chemical, Group: Atmospheric Pollution, Materials/Products Tested: Ambient Noise</b>		
Equivalent Sound Level Leq dB (A)	52.9	45.8
<b>Norms*</b>	Industrial Area	75
	Commercial Area	65
	Residential Area	55
	Silence Zone	45

Note: 1. \*indicates Rule 4 of Noise Pollution (Regulation & Control) Amendment Rules, 2000 (S.O. 1046 (E) dtd 22-11-2000)  
2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully without prior approval of ELPL.



Verified & Authorized by

*C.P. Jadhao*

(C.P. Jadhao)  
Quality Manager

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C-11, Amar Enclave Commercial Wing, Jog Layout, Prashant Nagar, Near Ajni Square, Nagpur - 440 015, Tel & Fax (0712) 2251470, Cell: 9766816862  
Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Ambient Noise Quality

Format No.: ELPL/QD4/TRD/7.8/AN

Report No. : ELPL/09-24/57-A		Report Date : 25-09-2024	
Name & Address of the Customer: <b>M/s. SUNFLAG IRON &amp; STEEL CO. LTD.</b> Village-Eklari (Warthi), Tal.- Mohadi, Dist.- Bhandara			
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.			
Sample Type : Ambient Noise		Sampling Location : N3 - STP	
Sampling Ref Method : IS 9989		Environment Condition : Sunny (during sampling)	
Sample Inward No. : ELPL/Sept-24/32/64/AN-57			
Sampling Date : 21-09-2024		Sampled by : ELPL Representative	
Location (Type) : Industrial / Commercial / Residential - Silence			

### Results of Measurements

Test Parameter		During Day Time (Hrly Avg)	During Night Time (Hrly Avg)
<b>Discipline : Chemical, Group: Atmospheric Pollution, Materials/Products Tested : Ambient Noise</b>			
Equivalent Sound Level Leq dB (A)		51.9	44.7
<b>Norms*</b>	Industrial Area	75	70
	Commercial Area	65	55
	Residential Area	55	45
	Silence Zone	50	40

Note : 1. \*indicates Rule 4 of Noise Pollution (Regulation & Control) Amendment Rules, 2000 (S.O. 1046 (E) dtd 22-11-2000)  
 2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or Fully Without prior approval of ELPL.



Verified & Authorized by

*(Signature)*  
 (C.P. Jadhao)  
 Quality Manager

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Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Ambient Noise Quality

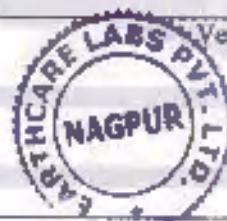
Format No.: ELPL/QD4/TRD/7.8/AN

Report No. : ELPL/09-24/68-A	Report Date : 01-10-2024
Name & Address of the Customer: <b>M/s. SUNFLAG IRON &amp; STEEL CO. LTD.</b> Village - Eklari (Warhi), Tal.- Mohadi, Dist.- Bhandara	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Ambient Noise Sampling Ref Method : IS 9989 Sample Inward No. : ELPL/Sept-24/32/76/AN-68	Sampling Location : N3 - STP Environment Condition : Sunny (during sampling)
Sampling Date : 28-09-2024	Sampled by : ELPL Representative
Location (Type) : Industrial / Commercial / Residential / Silence	

## Results of Measurements

Test Parameter		During Day Time (Hrly Avg)	During Night Time (Hrly Avg)
Discipline : Chemical, Group: Atmospheric Pollution, Materials/Products Tested : Ambient Noise			
Equivalent Sound Level Leq dB (A)		53.9	46.2
Norms*	Industrial Area	75	70
	Commercial Area	65	55
	Residential Area	55	45
	Silence Zone	50	40

Note : 1. \*Indicates Rule 4 of Noise Pollution (Regulation & Control) Amendment Rules, 2000 (S.O. 1046 (E) dtd 22-11-2000)  
2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or Fully Without prior approval of ELPL.



Verified & Authorized by

*C.P. Jadhao*

(C.P. Jadhao)  
Quality Manager

\*\* End of the Report \*\*





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Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Ambient Noise Quality

Form No.: ELPL/QM/TRD/7.8/AN

Report No. : ELPL/09-24/07-A	Report Date : 10-09-2024
Name & Address of the Customer: M/s. SUNFLAG IRON & STEEL CO. LTD. Village - Eklari (Warhi), Tal - Mohadi, Dist - Bhandara	
Ref.: Your Purchase Order No. 460002279 Dtd. 09-09-2023.	
Sample Type : Ambient Noise	Sampling Location : N4 - Guest House
Sampling Ref Method : IS 9989	Environment Condition : Sunny (during sampling)
Sample Inward No. : ELPL/Sep-24/32/17/AN-07	
Sampling Date : 07-09-2024	Sampled by : ELPL Representative
Location (Type) : Industrial/Commercial/Residential/Silence	

## Results of Measurements

Test Parameter	During Day Time (Hrly Avg)	During Night Time (Hrly Avg)
Discipline : Chemical, Group: Atmospheric Pollution, Materials/Products Tested : Ambient Noise		
Equivalent Sound Level Leq dB (A)	65.1	54.7
Norms*	Industrial Area	75
	Commercial Area	65
	Residential Area	55
	Silence Zone	45

Note : 1. \*indicates Rule 4 of Noise Pollution (Regulation & Control) Amendment Rules, 2000 (S.O. 1046 (E) dtd 22-11-2000)  
2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully without prior approval of ELPL.



Verified & Authorized by

*C.P. Jadhao*

(C.P. Jadhao)  
Quality Manager

\*\* End of the Report \*\*





# EARTHCARE LABS PRIVATE LIMITED

Environmental Laboratory & Consultancy Organization

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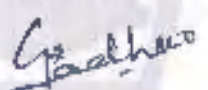
C-11, Amar Enclave Commercial Wing, Jog Layout, Prashant Nagar, Near Ajni Square, Nagpur - 440 015, Tel & Fax: (0712) 2261470, Cell: 9766816662  
Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Ambient Noise Quality

Form No.: ELPL/QD4/TRD/7.3/AN

Report No. : ELPL/09-24/32-A	Report Date : 16-09-2024
Name & Address of the Customer: M/s. SUNFLAG IRON & STEEL CO. LTD. Village - Eklari (Warhi), Tal.- Mohadi, Dist.- Bhandara	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Ambient Noise	Sampling Location : N4 - Guest House
Sampling Ref Method : IS 9989	Environment Condition : Sunny (during sampling)
Sample Inward No. : ELPL/Sept-24/32/49/AN-32	
Sampling Date : 14-09-2024	Sampled by : ELPL Representative
Location (Type) : Industrial/Commercial/Residential/Silence	

## Results of Measurements

Test Parameter		During Day Time (Hrly Avg)	During Night Time (Hrly Avg)
Discipline : Chemical, Group: Atmospheric Pollution, Materials/Products Tested : Ambient Noise			
Equivalent Sound Level Leq dB (A)		63.4	52.6
Norms*	Industrial Area	75	70
	Commercial Area	65	55
	Residential Area	55	45
	Silence Zone	50	40
Note : 1. *Indicates Rule 4 of Noise Pollution (Regulation & Control) Amendment Rules, 2000 (S.O. 1046 (E) dtd 22-11-2000) 2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or Fully Without prior approval of ELPL.			
		Verified & Authorized by  (C.P. Jadhao) Quality Manager	

\*\* End of the Report \*\*



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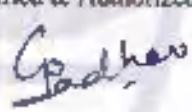
C-11, Amar Enclave Commercial Wing, Jog Layout, Prashant Nagar, Near Ajni Square, Nagpur - 440 015, Tel & Fax: (0712) 2251470, Cell: 9766616862  
Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Ambient Noise Quality

Format No.: ELPL/QD4/TRD/7.8/AN

Report No. : ELPL/09-24/58-A		Report Date : 25-09-2024	
Name & Address of the Customer: <b>M/s. SUNFLAG IRON &amp; STEEL CO. LTD.</b> Village - Eklari (Warthi), Tal.- Mohadi, Dist.- Bhandara			
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.			
Sample Type : Ambient Noise		Sampling Location : N4 - Guest House	
Sampling Ref Method : IS 9989		Environment Condition : Sunny (during sampling)	
Sample Inward No. : ELPL/Sept-24/32/64/AN-58			
Sampling Date : 21-09-2024		Sampled by : ELPL Representative	
Location (Type) : Industrial / Commercial / Residential / Silence			

### Results of Measurements

Test Parameter		During Day Time (Hrly Avg)	During Night Time (Hrly Avg)
Discipline : Chemical, Group: Atmospheric Pollution, Materials/Products Tested : Ambient Noise			
Equivalent Sound Level Leq dB (A)		61.7	53.1
Norms*	Industrial Area	75	70
	Commercial Area	65	55
	Residential Area	55	45
	Silence Zone	50	40
Note : 1. *Indicates Rule 4 of Noise Pollution (Regulation & Control) Amendment Rules, 2000 (S.O. 1046 (E) dtd 22-11-2000) 2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or Fully Without prior approval of ELPL.			
		Verified & Authorized by  (C.P. Jadhao) Quality Manager	

\*\* End of the Report \*\*





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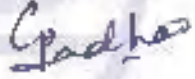
C-11, Amar Enclave Commercial Wing, Jog Layout, Prashant Nagar, Near Ajni Square, Nagpur - 440 015, Tel & Fax: (0712) 2251470, Cell: 9766616882  
Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Ambient Noise Quality

Format No.: ELPL/QD4/TRD/7.8/AN

Report No. : ELPL/09-24/69-A	Report Date : 01-10-2024
Name & Address of the Customer: <b>M/s. SUNFLAG IRON &amp; STEEL CO. LTD.</b> Village - Eklari (Warhi), Tal.- Mohadi, Dist.- Bhandara	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Ambient Noise	Sampling Location : N4 - Guest House
Sampling Ref Method : IS 9989	Environment Condition : Sunny (during sampling)
Sample Inward No. : ELPL/Sept-24/32/76/AN-69	
Sampling Date : 28-09-2024	Sampled by : ELPL Representative
Location (Type) : Industrial/Commercial/Residential/Silence	

## Results of Measurements

Test Parameter	During Day Time (Hrly Avg)	During Night Time (Hrly Avg)
Discipline : Chemical, Group : Atmospheric Pollution, Materials/Products Tested : Ambient Noise		
Equivalent Sound Level Leq dB (A)	64.1	53.3
Norms*	Industrial Area	70
	Commercial Area	55
	Residential Area	45
	Silence Zone	40
Note : 1. *Indicates Rule 4 of Noise Pollution (Regulation & Control) Amendment Rules, 2000 (S.O. 1046 (E) dtd 22-11-2000) 2. Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or Fully Without prior approval of ELPL.		
		Verified & Authorized by  (C.P. Jadhao) Quality Manager



\*\* End of the Report \*\*





TC-12331

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Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

**Test Report  
Ambient Air Quality**

Format No.: ELPL/ QD4/TRD/7.8/AA

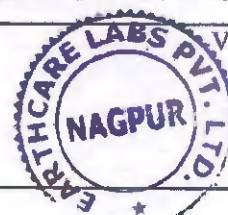
Report No : ELPL/09-24/280-A	Report Date : 30-09-2024
Name & Address of the Customer: <b>M/s. SUNFLAG IRON &amp; STEEL CO. LTD.</b> Village - Eklari (Warhi), Tal.- Mohadi, Dist.- Bhandara	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Ambient Air	Sampling Location : A-1 (Eklari Gate)
Sampling Ref Method : As Per Test Method	Environment Condition: Sunny (during sampling)
Sample Inward No. : ELPL/Sept-24/32/76/AA-280	
Sampling Date : From 25-09-2024 to 26-09-2024	Sampled by : ELPL Representative
Avg. Ambient Temp : 26.6 °C	Prominent Wind Direction : NW
Avg. Relative Humidity : 65.8 %	Average Wind Speed : 6.83 km/hr
Period of Analysis : From 27-09-2024 to 30-09-2024	

**Results of Analysis**

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/ Products Tested : Ambient Air					
1.	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	80	7.52	IS 5182 (Part 2)
2.	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	80	12.6	IS 5182 (Part 6)
3.	Particulate Matter size less than 10 µm (PM <sub>10</sub> )	µg/m <sup>3</sup>	100	57.4	IS 5182 (Part 23)
4.	Particulate Matter size less than 2.5 µm (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	60	26.3	IS : 5182 (Part 24)
5.	Ozone (O <sub>3</sub> )	µg/m <sup>3</sup>	180	BDL (< 20.0)	APHA- Method No.411 2 <sup>nd</sup> Edn
6.	Lead (Pb)	µg/m <sup>3</sup>	1.0	0.02	ELPL SOP No. AAS - 10 based on IS 5182 (Part 22)
7.	Carbon Monoxide (CO)	mg/m <sup>3</sup>	4.0	BDL (< 1.1)	NIOSH 6604
8.	Ammonia (NH <sub>3</sub> )	µg/m <sup>3</sup>	400	BDL (< 20.0)	APHA- Method No.401 2 <sup>nd</sup> Edn
9.	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	5.0	BDL (< 4.0)	IS 5182 (Part 11)
10.	Benzo [a] Pyrene (as BaP)-particulate phase only	ng/m <sup>3</sup>	1.0	BDL (< 0.8)	IS 5182 (Part 12)
11.	Arsenic (As)	ng/m <sup>3</sup>	6.0	BDL (< 2.0)	ELPL SOP No. AAS - 11 based on APHA- Method No. 804 2 <sup>nd</sup> Edn.
12.	Nickel (Ni)	ng/m <sup>3</sup>	20.0	BDL (< 3.5)	ELPL SOP No. AAS - 12 based on IS 5182 (Part 26)

Note : 1. \* indicates NAAQS (Govt. of India MoEF Notification No. GSR 826 CE dtd.16-11-2009 as amended).

2. Test results relates to sample collected &amp; tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.



Verified &amp; Authorized by

*(Signature)*(C.P. Jadhao)  
Quality Manager**\*\* End of the Report \*\***



TC-12331

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Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

**Test Report  
Ambient Air Quality**

Format No.: ELPL/ QD4/TRD/7.8/AA

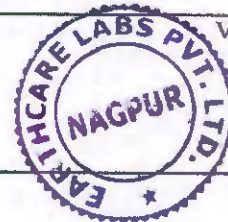
Report No : ELPL/09-24/281-A	Report Date : 30-09-2024
Name & Address of the Customer: <b>M/s. SUNFLAG IRON &amp; STEEL CO. LTD.</b> Village - Eklari (Warthi), Tal.- Mohadi, Dist.- Bhandara	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Ambient Air Sampling Ref Method : As Per Test Method Sample Inward No. : ELPL/Sept-24/32/76/AA-281	Sampling Location : <b>A-2 (Pump House-2 near Water Reservoir)</b> Environment Condition: Sunny (during sampling)
Sampling Date : From 25-09-2024 to 26-09-2024	Sampled by : ELPL Representative
Avg. Ambient Temp : 26.6 °C Avg. Relative Humidity : 65.8 %	Prominent Wind Direction : NW Average Wind Speed : 6.83 km/hr
Period of Analysis : From 27-09-2024 to 30-09-2024	

**Results of Analysis**

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/ Products Tested : Ambient Air					
1.	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	80	7.70	IS 5182 (Part 2)
2.	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	80	13.1	IS 5182 (Part 6)
3.	Particulate Matter size less than 10 µm (PM <sub>10</sub> )	µg/m <sup>3</sup>	100	59.4	IS 5182 (Part 23)
4.	Particulate Matter size less than 2.5 µm (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	60	28.2	IS : 5182 (Part 24)
5.	Ozone (O <sub>3</sub> )	µg/m <sup>3</sup>	180	BDL (< 20.0)	APHA- Method No.411 2 <sup>nd</sup> Edn
6.	Lead (Pb)	µg/m <sup>3</sup>	1.0	0.01	ELPL SOP No. AAS - 10 based on IS 5182 (Part 22)
7.	Carbon Monoxide (CO)	mg/m <sup>3</sup>	4.0	BDL (< 1.1)	NIOSH 6604
8.	Ammonia (NH <sub>3</sub> )	µg/m <sup>3</sup>	400	BDL (< 20.0)	APHA- Method No.401 2 <sup>nd</sup> Edn
9.	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	5.0	BDL (< 4.0)	IS 5182 (Part 11)
10.	Benzo [a] Pyrene (as BaP)- particulate phase only	ng/m <sup>3</sup>	1.0	BDL (< 0.8)	IS 5182 (Part 12)
11.	Arsenic (As)	ng/m <sup>3</sup>	6.0	BDL (< 2.0)	ELPL SOP No. AAS - 11 based on APHA- Method No. 804 2 <sup>nd</sup> Edn.
12.	Nickel (Ni)	ng/m <sup>3</sup>	20.0	BDL (< 3.5)	ELPL SOP No. AAS - 12 based on IS 5182 (Part 26)

Note : 1. \* indicates NAAQS (Govt. of India MoEF Notification No. GSR 826 CE dtd.16-11-2009 as amended).

2. Test results relates to sample collected &amp; tested only for the selected parameters. It shall not be reproduced partially or fully Without prior approval of ELPL.



Verified &amp; Authorized by

*C.P. Jadhao*  
(C.P. Jadhao)  
Quality Manager

**\*\* End of the Report \*\***





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## Environmental Laboratory & Consultancy Organization

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Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Ambient Air Quality

Format No.: ELPL/ QD4/TRD/7.8/AA

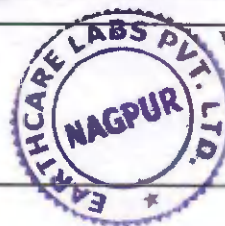
Report No : ELPL/09-24/282-A	Report Date : 30-09-2024
Name & Address of the Customer: <b>M/s. SUNFLAG IRON &amp; STEEL CO. LTD.</b> Village - Eklari (Warhi), Tal.- Mohadi, Dist.- Bhandara	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Ambient Air	Sampling Location : A-3 (STP)
Sampling Ref Method : As Per Test Method	Environment Condition: Sunny (during sampling)
Sample Inward No. : ELPL/Sept-24/32/76/AA-282	
Sampling Date : From 25-09-2024 to 26-09-2024	Sampled by : ELPL Representative
Avg. Ambient Temp : 26.6 °C	Prominent Wind Direction : NW
Avg. Relative Humidity : 65.8 %	Average Wind Speed : 6.83 km/hr
Period of Analysis : From 27-09-2024 to 30-09-2024	

## Results of Analysis

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/ Products Tested : Ambient Air					
1.	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	80	7.30	IS 5182 (Part 2)
2.	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	80	11.4	IS 5182 (Part 6)
3.	Particulate Matter size less than 10 µm (PM <sub>10</sub> )	µg/m <sup>3</sup>	100	54.3	IS 5182 (Part 23)
4.	Particulate Matter size less than 2.5 µm (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	60	26.4	IS : 5182 (Part 24)
5.	Ozone (O <sub>3</sub> )	µg/m <sup>3</sup>	180	BDL (< 20.0)	APHA- Method No.411 2 <sup>nd</sup> Edn
6.	Lead (Pb)	µg/m <sup>3</sup>	1.0	0.02	ELPL SOP No. AAS - 10 based on IS 5182 (Part 22)
7.	Carbon Monoxide (CO)	mg/m <sup>3</sup>	4.0	BDL (< 1.1)	NIOSH 6604
8.	Ammonia (NH <sub>3</sub> )	µg/m <sup>3</sup>	400	BDL (< 20.0)	APHA- Method No.401 2 <sup>nd</sup> Edn
9.	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	5.0	BDL (< 4.0)	IS 5182 (Part 11)
10.	Benzo [a] Pyrene (as BaP)- particulate phase only	ng/m <sup>3</sup>	1.0	BDL (< 0.8)	IS 5182 (Part 12)
11.	Arsenic (As)	ng/m <sup>3</sup>	6.0	BDL (< 2.0)	ELPL SOP No. AAS - 11 based on APHA- Method No. 804 2 <sup>nd</sup> Edn.
12.	Nickel (Ni)	ng/m <sup>3</sup>	20.0	BDL (< 3.5)	ELPL SOP No. AAS - 12 based on IS 5182 (Part 26)

Note : 1. \* indicates NAAQS (Govt. of India MoEF Notification No. GSR 826 CE dtd.16-11-2009 as amended).

2. Test results relates to sample collected & tested only for the selected parameters . It shall not be reproduced partially or fully Without prior approval of ELPL.



Verified & Authorized by

*C.P. Jadhao*  
(C.P. Jadhao)  
Quality Manager

\*\* End of the Report \*\*





TC-12331

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Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

**Test Report****Ambient Air Quality**

Format No.: ELPL/ QD4/TRD/7.8/AA

Report No : ELPL/09-24/283-A	Report Date : 30-09-2024
Name & Address of the Customer: <b>M/s. SUNFLAG IRON &amp; STEEL CO. LTD.</b> Village - Eklari (Warhi), Tal.- Mohadi, Dist.- Bhandara	
Ref.: Your Purchase Order No. 4600002279 Dtd. 09-09-2023.	
Sample Type : Ambient Air	Sampling Location : A4 (Guest House)
Sampling Ref Method : As Per Test Method	Environment Condition: Sunny (during sampling)
Sample Inward No. : ELPL/Sept-24/32/76/AA-283	
Sampling Date : From 25-09-2024 to 26-09-2024	Sampled by : ELPL Representative
Avg. Ambient Temp : 26.6 °C	Prominent Wind Direction : NW
Avg. Relative Humidity : 65.8 %	Average Wind Speed : 6.83 km/hr
Period of Analysis : From 27-09-2024 to 30-09-2024	

**Results of Analysis**

Sr. No.	Test Parameters	Unit	Norms*	Result	Test Method
Discipline : Chemical, Group : Atmospheric Pollution, Materials/ Products Tested : Ambient Air					
1.	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	80	6.87	IS 5182 (Part 2)
2.	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	80	10.5	IS 5182 (Part 6)
3.	Particulate Matter size less than 10 µm (PM <sub>10</sub> )	µg/m <sup>3</sup>	100	50.4	IS 5182 (Part 23)
4.	Particulate Matter size less than 2.5 µm (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	60	21.3	IS : 5182 (Part 24)
5.	Ozone (O <sub>3</sub> )	µg/m <sup>3</sup>	180	BDL (< 20.0)	APHA- Method No.411 2 <sup>nd</sup> Edn
6.	Lead (Pb)	µg/m <sup>3</sup>	1.0	0.02	ELPL SOP No. AAS - 10 based on IS 5182 (Part 22)
7.	Carbon Monoxide (CO)	mg/m <sup>3</sup>	4.0	BDL (< 1.1)	NIOSH 6604
8.	Ammonia (NH <sub>3</sub> )	µg/m <sup>3</sup>	400	BDL (< 20.0)	APHA- Method No.401 2 <sup>nd</sup> Edn
9.	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	5.0	BDL (< 4.0)	IS 5182 (Part 11)
10.	Benzo [a] Pyrene (as BaP)-particulate phase only	ng/m <sup>3</sup>	1.0	BDL (< 0.8)	IS 5182 (Part 12)
11.	Arsenic (As)	ng/m <sup>3</sup>	6.0	BDL (< 2.0)	ELPL SOP No. AAS - 11 based on APHA- Method No. 804 2 <sup>nd</sup> Edn.
12.	Nickel (Ni)	ng/m <sup>3</sup>	20.0	BDL (< 3.5)	ELPL SOP No. AAS - 12 based on IS 5182 (Part 26)

Note : 1. \* indicates NAAQS (Govt. of India MoEF Notification No. GSR 826 CE dtd.16-11-2009 as amended).

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Verified &amp; Authorized by

*Gadha*(C.P. Jadhao)  
Quality Manager

\*\* End of the Report \*\*



TC-12331

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Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

**Test Report  
Water Quality**

Format No.: ELPL/ QD4/TRD/7.8/W

Report No. : ELPL/05-24/112-A	Report Date : 07-06-2024
Name & Address of the Customer : <b>M/s. SUNFLAG IRON &amp; STEEL CO. LTD.</b> Village-Eklari (Warthi), Tal.- Mohadi, Dist.- Bhandara	
Ref.: Your Purchase Order No.	
Sample Type : Ground Water	Sampling Location : Inside Plant Near Rail Line
Sampling Ref Method : IS 3025 (Part 1) : 1987 RA 2019	Chowki - Dugwell
Sample Inward No. : ELPL/May-24/32/111/W-112	Environment Condition: Sunny (during sampling)
Sampling Date : 30-05-2024	Sampled By : ELPL Representative
Sample Receipt Date : 30-05-2024	
Period of Analysis : From 31-05-2024 to 07-06-2024	

**Results of Analysis**

Sr. No.	Test Parameters	Unit	Result	Test Method
<b>Discipline : Chemical, Group : Water &amp; Residues in water, Materials/Products Tested : Ground Water</b>				
1.	pH value	--	8.97	IS 3025 (Part 11)
2.	Turbidity	NTU	0.81	IS 3025 (Part 10)
3.	Total Dissolved Solids	mg/l	570.0	IS 3025 (Part 16)
4.	Aluminium (as Al)	mg/l	0.07	ELPL SOP No. BTS-2/Issue No.01/Jan - 20
5.	Barium (as Ba)	mg/l	0.10	ELPL SOP No. BTS-3 based on IS 3025 (Part 2)
6.	Boron (as B)	mg/l	0.12	ELPL SOP No. BTM-1 based on IS 3025 (Part 2)
7.	Calcium (as Ca)	mg/l	84.0	IS 3025 (Part 40)
8.	Chloride (as Cl )	mg/l	63.1	IS 3025 (Part 32)
9.	Copper (as Cu)	mg/l	0.03	ELPL SOP No. BTM-6 based on IS 3025 (Part 2)
10.	Fluoride (as F)	mg/l	0.41	IS 3025 (Part 60)
11.	Iron (as Fe)	mg/l	0.23	ELPL SOP No. BTM-7 based on IS 3025 (Part 2)
12.	Magnesium (as Mg)	mg/l	21.2	APHA-23 <sup>rd</sup> Ed. 3500-Mg B., Pg. No. 3-86
13.	Manganese (as Mn)	mg/l	0.04	ELPL SOP No. BTM-6 based on IS 3025 (Part 2)
14.	Selenium (as Se)	mg/l	BDL (< 0.01)	ELPL SOP No. BTS-5 based on IS 3025 (Part 2)
15.	Sulphate (as SO <sub>4</sub> )	mg/l	114.3	APHA-23 <sup>rd</sup> Ed. 4500-SO <sub>4</sub> <sup>2-</sup> E
16.	Silver (as Ag)	mg/l	BDL (< 0.06)	ELPL SOP No. BTS-6 based on IS 3025 (Part 2)





TC-12331


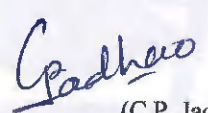
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Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

Format No.: ELPL/ QD4/TRD/7.8/W

Report No. : ELPL/05-24/112-A			Report Date : 07-06-2024	
Sr. No.	Test Parameters	Unit	Result	Test Method
17.	Total Alkalinity (as CaCO <sub>3</sub> )	mg/l	110.0	IS 3025 (Part 23)
18.	Total Hardness( as CaCO <sub>3</sub> )	mg/l	298.0	IS 3025 (Part 21)
19.	Zinc (as Zn)	mg/l	0.10	ELPL SOP No. BTM-8 based on IS 3025 (Part 2)
20.	Cadmium (as Cd)	mg/l	BDL (< 0.003)	ELPL SOP No. BTM-2 based on 3025 (Part 2)
21.	Lead (as Pb)	mg/l	BDL (< 0.01)	ELPL SOP No. BTM-8 based on IS 3025 (Part 2)
22.	Mercury (as Hg)	mg/l	BDL (< 0.001)	ELPL SOP No. BTM-10 based on IS 3025 (Part 2)
23.	Nickel (as Ni)	mg/l	BDL (< 0.02)	ELPL SOP No. BTM-11 based on IS 3025 (Part 2)
24.	Molybdenum (as Mo)	mg/l	BDL (< 0.04)	ELPL SOP No. BTS-10 based on IS 3025 (Part 2)
25.	Total Arsenic (as As)	mg/l	BDL (< 0.01)	ELPL SOP No. BTS-1 based on IS 3025 (Part 2)
26.	Total Chromium (as Cr)	mg/l	BDL (< 0.01)	ELPL SOP No. BTM-8 based on IS 3025 (Part 2)
Note : Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully without prior approval of ELPL.				
				
			Verified & Authorized by  (C.P. Jadhao) Quality Manager	

\*\* End of the Report \*\*





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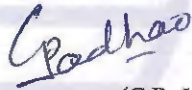
Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

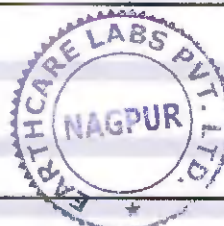
## Test Report Water Quality

Format No.: ELPL/ QD4/TRD/7.8/W

Report No. : ELPL/05-24/112-B	Report Date : 07-06-2024
Name & Address of the Customer : <b>M/s. SUNFLAG IRON &amp; STEEL CO. LTD.</b> Village-Eklari (Warthi), Tal.- Mohadi, Dist.- Bhandara	
Ref.: Your Purchase Order No.	
Sample Type : Ground Water	Sampling Location : Inside Plant Near Rail Line
Sampling Ref Method : IS 3025 (Part 1) : 1987 RA 2019	Chowki - Dugwell
Sample Inward No. : ELPL/May-24/32/111/W-112	Environment Condition: Sunny (during sampling)
Sampling Date : 30-05-2024	Sampled By : ELPL Representative
Sample Receipt Date : 30-05-2024	
Period of Analysis : From 31-05-2024 to 07-06-2024	

## Results of Analysis

Sr. No.	Test Parameters	Unit	Result	Test Method
<b>Discipline : Chemical, Group : Water &amp; Residues in water, Materials/ Products Tested : Ground Water</b>				
1.	Nitrate (as NO <sub>3</sub> )	mg/l	2.70	APHA-23 <sup>rd</sup> Ed. 4500-NO <sub>3</sub> <sup>-</sup> B, Pg No. 4-127
Note : Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully without prior approval of ELPL.				
				Verified & Authorized by  (C.P. Jadhao) Quality Manager



\*\* End of the Report \*\*



TC-12331

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Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

**Test Report  
Water Quality**

Format No.: ELPL/ QD4/TRD/7.8/W

Report No. : ELPL/05-24/113-A	Report Date : 07-06-2024
Name & Address of the Customer : <b>M/s. SUNFLAG IRON &amp; STEEL CO. LTD.</b> Village-Eklari (Warthi), Tal.- Mohadi, Dist.- Bhandara	
Ref.: Your Purchase Order No.	
Sample Type : Ground Water	Sampling Location : Inside Plant A.B. Colony in Front School –Dugwell
Sampling Ref Method : IS 3025 (Part 1) : 1987 RA 2019	
Sample Inward No. : ELPL/May-24/32/111/W-113	Environment Condition: Sunny (during sampling)
Sampling Date : 30-05-2024	Sampled By : ELPL Representative
Sample Receipt Date : 30-05-2024	
Period of Analysis : From 31-05-2024 to 07-06-2024	

**Results of Analysis**

Sr. No.	Test Parameters	Unit	Result	Test Method
<b>Discipline : Chemical, Group : Water &amp; Residues in water, Materials/Products Tested : Ground Water</b>				
1.	pH value	--	8.28	IS 3025(Part 11)
2.	Turbidity	NTU	3.50	IS 3025 (Part 10)
3.	Total Dissolved Solids	mg/l	394.0	IS 3025 (Part 16)
4.	Aluminium (as Al)	mg/l	0.06	ELPL SOP No. BTS-2/Issue No.01/Jan - 20
5.	Barium (as Ba)	mg/l	0.07	ELPL SOP No. BTS-3 based on IS 3025 (Part 2)
6.	Boron (as B)	mg/l	0.10	ELPL SOP No. BTM-1 based on IS 3025 (Part 2)
7.	Calcium (as Ca)	mg/l	72.1	IS 3025 (Part 40)
8.	Chloride (as Cl )	mg/l	24.6	IS 3025 (Part 32)
9.	Copper (as Cu)	mg/l	0.01	ELPL SOP No. BTM-6 based on IS 3025 (Part 2)
10.	Fluoride (as F)	mg/l	0.54	IS 3025 (Part 60)
11.	Iron (as Fe)	mg/l	0.10	ELPL SOP No. BTM-7 based on IS 3025 (Part 2)
12.	Magnesium (as Mg)	mg/l	10.4	APHA-23 <sup>rd</sup> Ed. 3500-Mg B., Pg. No. 3-86
13.	Manganese (as Mn)	mg/l	0.01	ELPL SOP No. BTM-6 based on IS 3025 (Part 2)
14.	Selenium (as Se)	mg/l	BDL (< 0.01)	ELPL SOP No. BTS-5 based on IS 3025 (Part 2)
15.	Sulphate (as SO <sub>4</sub> )	mg/l	7.61	APHA-23 <sup>rd</sup> Ed. 4500-SO <sub>4</sub> <sup>2-</sup> E





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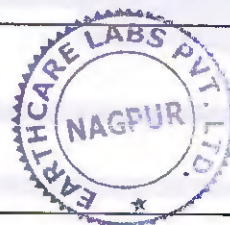
C-11, Amar Enclave Commercial Wing, Jog Layout, Prashant Nagar, Near Ajni Square, Nagpur - 440 015, Tel &amp; Fax: (0712) 2251470, Cell: 9766616862

Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

Format No.: ELPL/ QD4/TRD/7.8/W

Report No. : ELPL/05-24/113-A			Report Date : 07-06-2024	
Sr. No.	Test Parameters	Unit	Result	Test Method
16	Silver (as Ag)	mg/l	BDL (< 0.06)	ELPL SOP No. BTS-6 based on IS 3025 (Part 2)
17.	Total Alkalinity (as CaCO <sub>3</sub> )	mg/l	220.0	IS 3025 (Part 23)
18.	Total Hardness( as CaCO <sub>3</sub> )	mg/l	260.0	IS 3025 (Part 21)
19.	Zinc (as Zn)	mg/l	0.11	ELPL SOP No. BTM-8 based on IS 3025 (Part 2)
20.	Cadmium (as Cd)	mg/l	BDL (< 0.003)	ELPL SOP No. BTM-2 based on 3025 (Part 2)
21.	Lead (as Pb)	mg/l	BDL (< 0.01)	ELPL SOP No. BTM-8 based on IS 3025 (Part 2)
22.	Mercury (as Hg)	mg/l	BDL (< 0.001)	ELPL SOP No. BTM-10 based on IS 3025 (Part 2)
23.	Nickel (as Ni)	mg/l	BDL (< 0.02)	ELPL SOP No. BTM-11 based on IS 3025 (Part 2)
24.	Molybdenum (as Mo)	mg/l	BDL (< 0.04)	ELPL SOP No. BTS-10 based on IS 3025 (Part 2)
25.	Total Arsenic (as As)	mg/l	BDL (< 0.01)	ELPL SOP No. BTS-1 based on IS 3025 (Part 2)
26	Total Chromium (as Cr)	mg/l	BDL (< 0.01)	ELPL SOP No. BTM-8 based on IS 3025 (Part 2)

Note : Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully without prior approval of ELPL.



Verified &amp; Authorized by

*C.P. Jadhao*(C.P. Jadhao)  
Quality Manager**\*\* End of the Report \*\***





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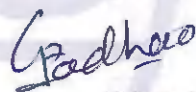
Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Water Quality

Format No.: ELPL/ QD4/TRD/7.8/W

Report No. : ELPL/05-24/113-B	Report Date : 07-06-2024
Name & Address of the Customer : <b>M/s. SUNFLAG IRON &amp; STEEL CO. LTD.</b> Village-Eklari (Warthi), Tal.- Mohadi, Dist.- Bhandara	
Ref.: Your Purchase Order No.	
Sample Type : Ground Water	Sampling Location : Inside Plant A.B. Colony in Front School -Dugwell
Sampling Ref Method : IS 3025 (Part 1) : 1987 RA 2019	Environment Condition: Sunny (during sampling)
Sample Inward No. : ELPL/May-24/32/111/W-113	
Sampling Date : 30-05-2024	Sampled By : ELPL Representative
Sample Receipt Date : 30-05-2024	
Period of Analysis : From 31-05-2024 to 07-06-2024	

## Results of Analysis

Sr. No.	Test Parameters	Unit	Result	Test Method
<b>Discipline : Chemical, Group : Water &amp; Residues in water, Materials/ Products Tested : Ground Water</b>				
1.	Nitrate (as NO <sub>3</sub> )	mg/l	3.51	APHA-23 <sup>rd</sup> Ed. 4500-NO <sub>3</sub> <sup>-</sup> B, Pg No. 4-127
Note : Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully without prior approval of ELPL.				
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\*\* End of the Report \*\*



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Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

**Test Report  
Water Quality**

Format No.: ELPL/ QD4/TRD/7.8/W

Report No. : ELPL/05-24/114-A	Report Date : 07-06-2024
Name & Address of the Customer : <b>M/s. SUNFLAG IRON &amp; STEEL CO. LTD.</b> Village-Eklari (Warthi), Tal.- Mohadi, Dist.- Bhandara	
Ref.: Your Purchase Order No.	
Sample Type : Ground Water	Sampling Location : Village Warthi Market-Dugwell
Sampling Ref Method : IS 3025 (Part 1) : 1987 RA 2019	Environment Condition: Sunny (during sampling)
Sample Inward No. : ELPL/May-24/32/111/W-114	Sampled By : ELPL Representative
Sampling Date : 30-05-2024	
Sample Receipt Date : 30-05-2024	
Period of Analysis : From 31-05-2024 to 07-06-2024	

**Results of Analysis**

Sr. No.	Test Parameters	Unit	Result	Test Method
<b>Discipline : Chemical, Group : Water &amp; Residues in water, Materials/Products Tested : Ground Water</b>				
1.	pH value	--	8.45	IS 3025(Part 11)
2.	Turbidity	NTU	12.1	IS 3025 (Part 10)
3.	Total Dissolved Solids	mg/l	1196.0	IS 3025 (Part 16)
4.	Aluminium (as Al)	mg/l	0.10	ELPL SOP No. BTS-2/Issue No.01/Jan - 20
5.	Barium (as Ba)	mg/l	0.07	ELPL SOP No. BTS-3 based on IS 3025 (Part 2)
6.	Boron (as B)	mg/l	0.10	ELPL SOP No. BTM-1 based on IS 3025 (Part 2)
7.	Calcium (as Ca)	mg/l	59.0	IS 3025 (Part 40)
8.	Chloride (as Cl )	mg/l	138.4	IS 3025 (Part 32)
9.	Copper (as Cu)	mg/l	0.02	ELPL SOP No. BTM-6 based on IS 3025 (Part 2)
10.	Fluoride (as F)	mg/l	0.61	IS 3025 (Part 60)
11.	Iron (as Fe)	mg/l	0.32	ELPL SOP No. BTM-7 based on IS 3025 (Part 2)
12.	Magnesium (as Mg)	mg/l	23.1	APHA-23 <sup>rd</sup> Ed. 3500-Mg B., Pg. No. 3-86
13.	Manganese (as Mn)	mg/l	0.02	ELPL SOP No. BTM-6 based on IS 3025 (Part 2)
14.	Selenium (as Se)	mg/l	BDL (< 0.01)	ELPL SOP No. BTS-5 based on IS 3025 (Part 2)
15.	Sulphate (as SO <sub>4</sub> )	mg/l	75.9	APHA-23 <sup>rd</sup> Ed. 4500-SO <sub>4</sub> <sup>2-</sup> E





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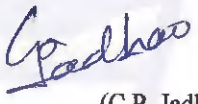
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**Email:** earthcare2000@gmail.com, **Website:** www.earthcarenagpur.com

Format No.: ELPL/ QD4/TRD/7.8/W

Report No. : ELPL/05-24/114-A			Report Date : 07-06-2024	
Sr. No.	Test Parameters	Unit	Result	Test Method
16	Silver (as Ag)	mg/l	BDL (< 0.06)	ELPL SOP No. BTS-6 based on IS 3025 (Part 2)
17.	Total Alkalinity (as CaCO <sub>3</sub> )	mg/l	340.0	IS 3025 (Part 23)
18.	Total Hardness( as CaCO <sub>3</sub> )	mg/l	225.0	IS 3025 (Part 21)
19.	Zinc (as Zn)	mg/l	0.13	ELPL SOP No. BTM-8 based on IS 3025 (Part 2)
20.	Cadmium (as Cd)	mg/l	BDL (< 0.003)	ELPL SOP No. BTM-2 based on 3025 (Part 2)
21.	Lead (as Pb)	mg/l	BDL (< 0.01)	ELPL SOP No. BTM-8 based on IS 3025 (Part 2)
22.	Mercury (as Hg)	mg/l	BDL (< 0.001)	ELPL SOP No. BTM-10 based on IS 3025 (Part 2)
23.	Nickel (as Ni)	mg/l	BDL (< 0.02)	ELPL SOP No. BTM-11 based on IS 3025 (Part 2)
24.	Molybdenum (as Mo)	mg/l	BDL (< 0.04)	ELPL SOP No. BTS-10 based on IS 3025 (Part 2)
25.	Total Arsenic (as As)	mg/l	BDL (< 0.01)	ELPL SOP No. BTS-1 based on IS 3025 (Part 2)
26	Total Chromium (as Cr)	mg/l	BDL (< 0.01)	ELPL SOP No. BTM-8 based on IS 3025 (Part 2)
Note : Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully without prior approval of ELPL.				
				
			Verified & Authorized by  (C.P. Jadhao) Quality Manager	

\*\* End of the Report \*\*





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Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

## Test Report Water Quality

Format No.: ELPL/ QD4/TRD/7.8/W

Report No. : ELPL/05-24/114-B	Report Date : 07-06-2024
Name & Address of the Customer : <b>M/s. SUNFLAG IRON &amp; STEEL CO. LTD.</b> Village-Eklari (Warthi), Tal.- Mohadi, Dist.- Bhandara	
Ref.: Your Purchase Order No.	
Sample Type : Ground Water	Sampling Location : Village Warthi Market-Dugwell
Sampling Ref Method : IS 3025 (Part 1) : 1987 RA 2019	Environment Condition: Sunny (during sampling)
Sample Inward No. : ELPL/May-24/32/111/W-114	
Sampling Date : 30-05-2024	Sampled By : ELPL Representative
Sample Receipt Date : 30-05-2024	
Period of Analysis : From 31-05-2024 to 07-06-2024	

## Results of Analysis

Sr. No.	Test Parameters	Unit	Result	Test Method
<b>Discipline : Chemical, Group : Water &amp; Residues in water, Materials/ Products Tested : Ground Water</b>				
1.	Nitrate (as NO <sub>3</sub> )	mg/l	2.75	APHA-23 <sup>rd</sup> Ed. 4500-NO <sub>3</sub> <sup>-</sup> B, Pg No. 4-127
Note : Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully without prior approval of ELPL.				
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**\*\* End of the Report \*\***



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**Test Report  
Water Quality**

Format No.: ELPL/ QD4/TRD/7.8/W

Report No. : ELPL/05-24/115-A	Report Date : 07-06-2024
Name & Address of the Customer : <b>M/s. SUNFLAG IRON &amp; STEEL CO. LTD.</b> Village-Eklari (Warthi), Tal.- Mohadi, Dist.- Bhandara	
Ref.: Your Purchase Order No.	
Sample Type : Ground Water	Sampling Location : Village Eklari In Front of Grampanchayat - Dugwell
Sampling Ref Method : IS 3025 (Part I) : 1987 RA 2019	Environment Condition: Sunny (during sampling)
Sample Inward No. : ELPL/May-24/32/111/W-115	
Sampling Date : 30-05-2024	Sampled By : ELPL Representative
Sample Receipt Date : 30-05-2024	
Period of Analysis : From 31-05-2024 to 07-06-2024	

**Results of Analysis**

Sr. No.	Test Parameters	Unit	Result	Test Method
<b>Discipline : Chemical, Group : Water &amp; Residues in water, Materials/Products Tested : Ground Water</b>				
1.	pH value	--	8.01	IS 3025(Part 11)
2.	Turbidity	NTU	7.20	IS 3025 (Part 10)
3.	Total Dissolved Solids	mg/l	810.0	IS 3025 (Part 16)
4.	Aluminium (as Al)	mg/l	0.08	ELPL SOP No. BTS-2/Issue No.01/Jan - 20
5.	Barium (as Ba)	mg/l	0.10	ELPL SOP No. BTS-3 based on IS 3025 (Part 2)
6.	Boron (as B)	mg/l	0.12	ELPL SOP No. BTM-1 based on IS 3025 (Part 2)
7.	Calcium (as Ca)	mg/l	60.0	IS 3025 (Part 40)
8.	Chloride (as Cl )	mg/l	78.1	IS 3025 (Part 32)
9.	Copper (as Cu)	mg/l	0.02	ELPL SOP No. BTM-6 based on IS 3025 (Part 2)
10.	Fluoride (as F)	mg/l	0.20	IS 3025 (Part 60)
11.	Iron (as Fe)	mg/l	0.28	ELPL SOP No. BTM-7 based on IS 3025 (Part 2)
12.	Magnesium (as Mg)	mg/l	32.1	APHA-23 <sup>rd</sup> Ed. 3500-Mg B., Pg. No. 3-86
13.	Manganese (as Mn)	mg/l	0.05	ELPL SOP No. BTM-6 based on IS 3025 (Part 2)
14.	Selenium (as Se)	mg/l	BDL (< 0.01)	ELPL SOP No. BTS-5 based on IS 3025 (Part 2)
15.	Sulphate (as SO <sub>4</sub> )	mg/l	72.3	APHA-23 <sup>rd</sup> Ed. 4500-SO <sub>4</sub> <sup>2-</sup> E





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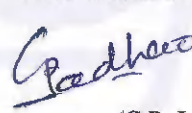
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Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

Format No.: ELPL/ QD4/TRD/7.8/W

Report No. : ELPL/05-24/115-A			Report Date : 07-06-2024	
Sr. No.	Test Parameters	Unit	Result	Test Method
16	Silver (as Ag)	mg/l	BDL (< 0.06)	ELPL SOP No. BTS-6 based on IS 3025 (Part 2)
17.	Total Alkalinity (as CaCO <sub>3</sub> )	mg/l	150.0	IS 3025 (Part 23)
18.	Total Hardness( as CaCO <sub>3</sub> )	mg/l	310.0	IS 3025 (Part 21)
19.	Zinc (as Zn)	mg/l	0.12	ELPL SOP No. BTM-8 based on IS 3025 (Part 2)
20.	Cadmium (as Cd)	mg/l	BDL (< 0.003)	ELPL SOP No. BTM-2 based on 3025 (Part 2)
21.	Lead (as Pb)	mg/l	BDL (< 0.01)	ELPL SOP No. BTM-8 based on IS 3025 (Part 2)
22.	Mercury (as Hg)	mg/l	BDL (< 0.001)	ELPL SOP No. BTM-10 based on IS 3025 (Part 2)
23.	Nickel (as Ni)	mg/l	BDL (< 0.02)	ELPL SOP No. BTM-11 based on IS 3025 (Part 2)
24.	Molybdenum (as Mo)	mg/l	BDL (< 0.04)	ELPL SOP No. BTS-10 based on IS 3025 (Part 2)
25.	Total Arsenic (as As)	mg/l	BDL (< 0.01)	ELPL SOP No. BTS-1 based on IS 3025 (Part 2)
26	Total Chromium (as Cr)	mg/l	BDL (< 0.01)	ELPL SOP No. BTM-8 based on IS 3025 (Part 2)
Note : Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully without prior approval of ELPL.				
			Verified & Authorized by  (C.P. Jadhao) Quality Manager	



\*\* End of the Report \*\*





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Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

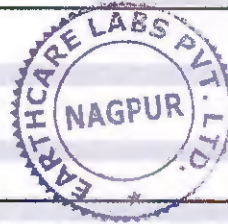
## Test Report Water Quality

Format No.: ELPL/ QD4/TRD/7.8/W

Report No. : ELPL/05-24/115-B	Report Date : 07-06-2024
Name & Address of the Customer : <b>M/s. SUNFLAG IRON &amp; STEEL CO. LTD.</b> Village-Eklari (Warthi), Tal.- Mohadi, Dist.- Bhandara	
Ref.: Your Purchase Order No.	
Sample Type : Ground Water Sampling Ref Method : IS 3025 (Part 1) : 1987 RA 2019 Sample Inward No. : ELPL/May-24/32/111/W-115	Sampling Location : Village Eklari In Front of Grampanchayat - Dugwell Environment Condition: Sunny (during sampling)
Sampling Date : 30-05-2024 Sample Receipt Date : 30-05-2024	Sampled By : ELPL Representative
Period of Analysis : From 31-05-2024 to 07-06-2024	

## Results of Analysis

Sr. No.	Test Parameters	Unit	Result	Test Method
<b>Discipline : Chemical, Group : Water &amp; Residues in water, Materials/ Products Tested : Ground Water</b>				
1.	Nitrate (as NO <sub>3</sub> )	mg/l	24.6	APHA-23 <sup>rd</sup> Ed. 4500-NO <sub>3</sub> <sup>-</sup> B, Pg No. 4-127
Note : Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully without prior approval of ELPL.				
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\*\* End of the Report \*\*



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**Test Report  
Water Quality**

Format No.: ELPL/ QD4/TRD/7.8/W

Report No. : ELPL/05-24/116-A	Report Date : 07-06-2024
Name & Address of the Customer : <b>M/s. SUNFLAG IRON &amp; STEEL CO. LTD.</b> Village-Eklari (Warthi), Tal.- Mohadi, Dist.- Bhandara	
Ref.: Your Purchase Order No.	
Sample Type : Surface Water	Sampling Location : Village Warthi-Pond
Sampling Ref Method : IS 3025 (Part 1) : 1987 RA 2019	Environment Condition: Sunny (during sampling)
Sample Inward No. : ELPL/May-24/32/111/W-116	
Sampling Date : 30-05-2024	Sampled By : ELPL Representative
Sample Receipt Date : 30-05-2024	
Period of Analysis : From 31-05-2024 to 07-06-2024	

**Results of Analysis**

Sr. No.	Test Parameters	Unit	Result	Test Method
<b>Discipline : Chemical, Group : Water &amp; Residues in water, Materials/Products Tested : Surface Water</b>				
1.	pH value	--	8.07	IS 3025(Part 11)
2.	Turbidity	NTU	10.6	IS 3025 (Part 10)
3.	Total Dissolved Solids	mg/l	435.0	IS 3025 (Part 16)
4.	Aluminium (as Al)	mg/l	0.07	ELPL SOP No. BTS-2/Issue No.01/Jan -- 20
5.	Barium (as Ba)	mg/l	0.10	ELPL SOP No. BTS-3 based on IS 3025 (Part 2)
6.	Boron (as B)	mg/l	0.12	ELPL SOP No. BTM-1 based on IS 3025 (Part 2)
7.	Calcium (as Ca)	mg/l	43.1	IS 3025 (Part 40)
8.	Chloride (as Cl )	mg/l	49.6	IS 3025 (Part 32)
9.	Copper (as Cu)	mg/l	0.01	ELPL SOP No. BTM-6 based on IS 3025 (Part 2)
10.	Fluoride (as F)	mg/l	0.28	IS 3025 (Part 60)
11.	Iron (as Fe)	mg/l	0.26	ELPL SOP No. BTM-7 based on IS 3025 (Part 2)
12.	Magnesium (as Mg)	mg/l	12.7	APHA-23 <sup>rd</sup> Ed. 3500-Mg B., Pg. No. 3-86
13.	Manganese (as Mn)	mg/l	0.01	ELPL SOP No. BTM-6 based on IS 3025 (Part 2)
14.	Nitrate (as NO <sub>3</sub> )	mg/l	2.60	APHA-23 <sup>rd</sup> Ed. 4500-NO <sub>3</sub> <sup>-</sup> B, Pg No. 4-127
15.	Selenium (as Se)	mg/l	BDL (< 0.01)	ELPL SOP No. BTS-5 based on IS 3025 (Part 2)





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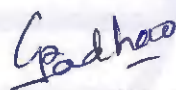
**EARTHCARE LABS PRIVATE LIMITED****Environmental Laboratory & Consultancy Organization**

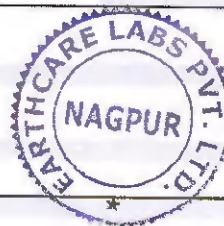
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Email: earthcare2000@gmail.com, Website: www.earthcarenagpur.com

Format No.: ELPL/ QD4/TRD/7.8/W

Report No. : ELPL/05-24/116-A			Report Date : 07-06-2024	
Sr. No.	Test Parameters	Unit	Result	Test Method
16	Sulphate (as SO <sub>4</sub> )	mg/l	61.6	APHA-23 <sup>rd</sup> Ed. 4500-SO <sub>4</sub> <sup>2-</sup> E
17.	Silver (as Ag)	mg/l	BDL (< 0.06)	ELPL SOP No. BTS-6 based on IS 3025 (Part 2)
18.	Total Alkalinity (as CaCO <sub>3</sub> )	mg/l	140.0	IS 3025 (Part 23)
19.	Total Hardness( as CaCO <sub>3</sub> )	mg/l	170.0	IS 3025 (Part 21)
20.	Zinc (as Zn)	mg/l	0.05	ELPL SOP No. BTM-8 based on IS 3025 (Part 2)
21.	Cadmium (as Cd)	mg/l	BDL (< 0.003)	ELPL SOP No. BTM-2 based on 3025 (Part 2)
22.	Lead (as Pb)	mg/l	BDL (< 0.01)	ELPL SOP No. BTM-8 based on IS 3025 (Part 2)
23.	Mercury (as Hg)	mg/l	BDL (< 0.001)	ELPL SOP No. BTM-10 based on IS 3025 (Part 2)
24.	Nickel (as Ni)	mg/l	BDL (< 0.02)	ELPL SOP No. BTM-11 based on IS 3025 (Part 2)
25.	Molybdenum (as Mo)	mg/l	BDL (< 0.04)	ELPL SOP No. BTS-10 based on IS 3025 (Part 2)
26	Total Arsenic (as As)	mg/l	BDL (< 0.01)	ELPL SOP No. BTS-1 based on IS 3025 (Part 2)
27.	Total Chromium (as Cr)	mg/l	BDL (< 0.01)	ELPL SOP No. BTM-8 based on IS 3025 (Part 2)
Note : Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully without prior approval of ELPL.				
			Verified & Authorized by  (C.P. Jadhao) Quality Manager	



\*\* End of the Report \*\*





TC-12331

**EARTHCARE LABS PRIVATE LIMITED****Environmental Laboratory & Consultancy Organization**

(NABL QCI Accredited, MoEF&amp;CC Recognized, ISO 9001, ISO 14001 &amp; OHSAS 45001 Certified)

C-11, Amar Enclave Commercial Wing, Jog Layout, Prashant Nagar, Near Ajni Square, Nagpur - 440 015, Tel &amp; Fax: (0712) 2251470, Cell: 9766616862

**Email:** earthcare2000@gmail.com, **Website:** www.earthcarenagpur.com**Test Report  
Water Quality**

Format No.: ELPL/ QD4/TRD/7.8/W

Report No. : ELPL/05-24/117-A	Report Date : 07-06-2024
Name & Address of the Customer : <b>M/s. SUNFLAG IRON &amp; STEEL CO. LTD.</b> Village-Eklari (Warthi), Tal.- Mohadi, Dist.- Bhandara	
Ref.: Your Purchase Order No.	
Sample Type : Surface Water	Sampling Location : Village Eklari Temple
Sampling Ref Method : IS 3025 (Part 1) : 1987 RA 2019	Backside-Pond
Sample Inward No. : ELPL/May-24/32/111/W-117	Environment Condition: Sunny (during sampling)
Sampling Date : 30-05-2024	Sampled By : ELPL Representative
Sample Receipt Date : 30-05-2024	
Period of Analysis : From 31-05-2024 to 07-06-2024	

**Results of Analysis**

Sr. No.	Test Parameters	Unit	Result	Test Method
<b>Discipline : Chemical, Group : Water &amp; Residues in water, Materials/Products Tested : Surface Water</b>				
1.	pH value	--	8.21	IS 3025(Part 11)
2.	Turbidity	NTU	10.2	IS 3025 (Part 10)
3.	Total Dissolved Solids	mg/l	418.0	IS 3025 (Part 16)
4.	Aluminium (as Al)	mg/l	0.12	ELPL SOP No. BTS-2/Issue No.01/Jan - 20
5.	Barium (as Ba)	mg/l	0.10	ELPL SOP No. BTS-3 based on IS 3025 (Part 2)
6.	Boron (as B)	mg/l	0.14	ELPL SOP No. BTM-1 based on IS 3025 (Part 2)
7.	Calcium (as Ca)	mg/l	32.8	IS 3025 (Part 40)
8.	Chloride (as Cl )	mg/l	45.4	IS 3025 (Part 32)
9.	Copper (as Cu)	mg/l	0.01	ELPL SOP No. BTM-6 based on IS 3025 (Part 2)
10.	Fluoride (as F)	mg/l	0.27	IS 3025 (Part 60)
11.	Iron (as Fe)	mg/l	0.45	ELPL SOP No. BTM-7 based on IS 3025 (Part 2)
12.	Magnesium (as Mg)	mg/l	12.7	APHA-23 <sup>rd</sup> Ed. 3500-Mg B., Pg. No. 3-86
13.	Manganese (as Mn)	mg/l	0.04	ELPL SOP No. BTM-6 based on IS 3025 (Part 2)
14.	Nitrate (as NO <sub>3</sub> )	mg/l	1.78	APHA-23 <sup>rd</sup> Ed. 4500-NO <sub>3</sub> <sup>-</sup> B, Pg No. 4-127
15.	Selenium (as Se)	mg/l	BDL (< 0.01)	ELPL SOP No. BTS-5 based on IS 3025 (Part 2)



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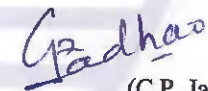
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**Email:** earthcare2000@gmail.com, **Website:** www.earthcarenagpur.com

Format No.: ELPL/ QD4/TRD/7.8/W

Report No. : ELPL/05-24/117-A			Report Date : 07-06-2024	
Sr. No.	Test Parameters	Unit	Result	Test Method
16	Sulphate (as SO <sub>4</sub> )	mg/l	76.1	APHA-23 <sup>rd</sup> Ed. 4500-SO <sub>4</sub> <sup>2-</sup> E
17.	Silver (as Ag)	mg/l	BDL (< 0.06)	ELPL SOP No. BTS-6 based on IS 3025 (Part 2)
18.	Total Alkalinity (as CaCO <sub>3</sub> )	mg/l	120.0	IS 3025 (Part 23)
19.	Total Hardness( as CaCO <sub>3</sub> )	mg/l	145.0	IS 3025 (Part 21)
20.	Zinc (as Zn)	mg/l	0.06	ELPL SOP No. BTM-8 based on IS 3025 (Part 2)
21.	Cadmium (as Cd)	mg/l	BDL (< 0.003)	ELPL SOP No. BTM-2 based on 3025 (Part 2)
22.	Lead (as Pb)	mg/l	BDL (< 0.01)	ELPL SOP No. BTM-8 based on IS 3025 (Part 2)
23.	Mercury (as Hg)	mg/l	BDL (< 0.001)	ELPL SOP No. BTM-10 based on IS 3025 (Part 2)
24.	Nickel (as Ni)	mg/l	BDL (< 0.02)	ELPL SOP No. BTM-11 based on IS 3025 (Part 2)
25.	Molybdenum (as Mo)	mg/l	BDL (< 0.04)	ELPL SOP No. BTS-10 based on IS 3025 (Part 2)
26	Total Arsenic (as As)	mg/l	BDL (< 0.01)	ELPL SOP No. BTS-1 based on IS 3025 (Part 2)
27.	Total Chromium (as Cr)	mg/l	BDL (< 0.01)	ELPL SOP No. BTM-8 based on IS 3025 (Part 2)
Note : Test results relates to sample collected & tested only for the selected parameters. It shall not be reproduced partially or fully without prior approval of ELPL.				
			Verified & Authorized by	
			  (C.P. Jadhao) Quality Manager	

**\*\* End of the Report \*\***