SISCO/MoEFCC/19-20 / 2575

Date: 24.05.2020

SUNFLAG STEEL

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

Subject : Six Monthly Compliance Report of the Environmental Clearance(EC) for Period from 1 st October 2019 to 31st March 2020

Reference : 1) MoEF, Govt. of India, Environmental Clearance Letter No. J-11011/355/2004-IA II (I) dated 21.02.2006.
2) MoEF & CC, Govt. of India, Environmental Clearance Letter No.J-11011/355/2004-IA II (I) dated 02.05.17.

Dear Sir,

With reference to above EC letter ref no.1 & 2, we are submitting herewith the status of progress & compliance of stipulated conditions (i.e. Six monthly EC Compliance report) of **EC General conditions no. iii & iX of above ref no 1 and EC General conditions no. iii & Xii of above ref no 2,** for the period from 1st October 2019 to 31st March 2020, stipulated in environmental clearance granted to **M/S Sunflag Iron & Steel Co. Ltd., Village :Eklari (Bhandara Road), Taluka : Mohadi, Distt : Bhandara (M.S.)**

Hope you will find it in order.

Thanking you.

Yours faithfully,

For SUNFLAG IRON & STEEL CO. LTD.

Ramchandra Dalvi
Executive Director (Works)

Encl: As above

Copy to:

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

SIX MONTHLY COMPLIANCE REPORT

PART I : DATA SHEET

1	Project Type: River-valley / Mining / Industry /Thermal / Nuclear / Other (Specify)	Integrated steel Plant
2	Name of the Project	M/s Sunflag Iron & Steel Co.Ltd, Located near Village Eklari, Warthi, Taluka : Mohadi, Bhandara District of Maharashtra
3	Clearance Letter (s) / OM No. and date	1) J-11011/355/2004- IA.II (I) dated 21.02.2006 2) J-11011/355/2004- IA.II (I) dated 02.05.2017
4	Location	
	a. District (s)	Bhandara
	b. State (s)	Maharashtra
	c. Latitude / Longitude	21°14'5" North / 79°37'50" East
5	Address for correspondence	Executive Director (Works),
	Address of concerned Project Chief Engineer (with Pin Code & Telephone / Telex / Fax Numbers) :	M/s Sunflag Iron & Steel Co. Ltd., Village – Warthi, Tah.- Mohadi, District – Bhandara , Pin :441905 Maharashtra Ph. 07184 – 285551 to 285555 Fax – 07184 – 285570
6	Salient features	

	a. Of the Project	M/s Sunflag Iron & 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 & 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 & Blooms at Continuous Casting Machine (CCM). The Steel Billets are taken to Bar & Section Mill (BSM) & 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. Sunflag Steel caters to the demands of various core sector industries like Automobiles, Railway, Defense, 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, 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. The factory have certified on ISO 9001:2015, IATF 16949:2016 and TUV-NORD on ISO-14001:2015 and BS OHSAS:45001:2018..
	b. Of the Environmental Management Plan	At DRP air pollution control system provided for producing sponge iron from kiln comprises of waste heat recovery boilers and electrostatic precipitators.,nos.of bag filters also have been provided to control secondary emission. 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 & 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. At CPP, air pollution control system comprising of devices i.e. economizer, air preheater and electrostatic precipitator have been provided. 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. At Sinter plant. The system comprises of Suction Ducting, Dust Settling Chamber, Electrostatic Precipitator, ID Fan and Bag Filters. Online continuous ambient air quality monitoring system has been installed at three location. On line continuous monitoring system has been installed in stacks to monitor SPM & SO2 and connected to CPCB server. Online continuous effluent quality monitoring system has been installed and connected to CPCB server.
7	Breakup of the Project area	
	a. Submergence Area: Forest & Non Forest	Project area is located in non forest land.
	b. Others	---
8	Breakup of the Project affected population with enumeration of those losing houses/dwelling units only, agricultural land only, both dwelling units & both dwelling units & agricultural land & landless laborers/artisan a. SC, ST / Adivasis b. Others	Not Applicable
9	Financial Details	

	a. Project costs as originally planned & subsequent revised estimates and the year of price reference.	Rs.1510 Crores for expansion project, after getting EC vide No.J-11011/355/2004- IA.II (I) dated 02.05.2017. (Total expenditure on entire Sunflag Steel project is Rs.1326.22 crores for existiing plant so far) till date the expansion projects completed at cost of Rs.522.23 crores **included production units of Pig Iron /Hot Metal, Ingot /Billets, Rolled steel Products and Sinter Plant**

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
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
Total		**6503**	**2560.88**

c. Benefit Cost Ratio / Internal rate of Return and the year of assessment.

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	d. Whether (c) includes the cost of Environmental Management as shown in the above.	-----
	b. Actual expenditure incurred on the Project so far	Rs.1510 Crores approved for expansion project after getting EC vide No.J-11011/355/2004- IA.II (I) dated 02.05.2017. (Total expenditure on entire existing Sunflag Steel project is Rs. 1848.45 i.e.1326.22 crores for existiong 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.
	c. Actual expenditure incurred on the Environmental Management Plan so far	Rs. 66.98 Crores including EMP of expansion project.
10	Forest land requirement	Not Applicable
	a. The status of approval for diversion of Forestland for non-forestry use	Not Applicable
	b. The Status of clearing felling	Not Applicable
	c. The status of compensatory Afforestation if any	Not Applicable
11.	The status of clear felling in non-forest areas (such as submergence area of reservoir, Approach roads), if any with quantitative information	Not Applicable

12.	Status of construction (Actual and/or Planned)	
	a. Date of commencement (Actual and/or Planned)	After got EC vide No.J-11011/355/2004- IA.II (I) dated 02.05.2017, start project activities of following units.. viz.. Pig Iron/Hot Metal, Ingot/Billets, Rolled steel Products and Sinter Plant.
	b. Date of completion (Actual and/or Planned)	Pig Iron/Hot Metal, Ingot/Billets, Rolled steel Products and Sinter Plant project completed in year 2018-19 and 2019-2020.
13.	Reasons for the delay if the project is yet to start	Not Applicable
14.	Dates of site visits a. The dates on which the Project was monitored by Regional Office on previous occasions, if any	———
	b. Date of site visit for this monitoring Report	
15.	Details of correspondence with project authorities for obtaining action plan / information on status of compliance to safeguards other than the routine letters for logistic support for site visit.	———

EC COMPLIANCE REPORT
&
ENVIRONMENTAL STATUS REPORT
(October 2019 - March 2020)

of

SUNFLAG IRON & STEEL CO. LTD.

Located At

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

Project Proponent:

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

1.0 PREAMBLE

1.1 Introduction

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

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

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

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

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

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

Period: From 1st October - 2019 to 31st – March - 2020.

(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 19th 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.	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. 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 & 60 m high forced draft chimney. Two separate fume/dust extraction and control system (i.e. The Primary and Secondary Fume Extraction System for SMS was installed & commissioned on July 2012 for further improving the Dust & Fume extraction) comprising of reverse air bag house, pulse jet bag house & common chimney of height 43 m are provided for 50 T capacity electric arc furnace (EAF) and ladle heating furnace (LHF). 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. 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.

		The Mini Blast Furnace (MBF) (350 M3) is provided with adequate APC system. From MBF, the dust-laden gas after the dust catcher is cleaned in the GCP. There is two-stage venturi system, first stage provides the pre-cleaning of the gas and the second stage provides the final cleaning of the gas. The Blast Furnace gas after the venturi enters the moisture separator, where the finest water droplets are flung against the scrubber shell and run down into the sump and gas free particle leaves the GCP, the cleaned MBF gas is used at Sinter plant, Reheating furnaces of rolling mills and Hardening furnace. There is an effective air pollution control systems at sinter plant. The system comprises of Suction Ducting, Dust Settling Chamber, Electrostatic Precipitator, ID Fan and Stack. The cleaned gases after ESP are released to atmosphere through forced draft chimney. Online continuous ambient air quality monitoring system has been installed at three locations. On line continuous monitoring system has been installed in stacks to monitor SPM & SO2. The emissions from the stacks and various units meet the prescribed standards results. Please refer **Annexure -1 (A)**

ii)	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. 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.	At the vulnerable fugitive emission sources like spillage/raw materials/coal hand lings etc., in plant centralized de-dusting facility provided. The plant has provided dust suppression system consisting of water sprinklers, suction hood, Covered shed and conveyer, bag filters at various points such as material transfer points, and other enclosed raw material handling areas in the existing plant. Fugitive emissions are being regularly monitored and maintained the records as per guidelines.
iii)	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^3. 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.	At DRP 1 & 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 & 60 m through a chimney. The emissions from various units are within prescribed standard.

iv)	Total requirement of water shall not exceed 12,000 m^3/d as per agreement signed with the Govt. of Maharashtra. Out of 3,000 m^3/d waste water generated. 2,400 m3/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.	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 m3/day. SISCO has been granted permission to draw water from Wainganga River @ 13,200 m3/day. Industrial effluent generation from the existing plant at rated capacity is 2414 m3/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. Domestic effluent from the plant is conveyed through drains to septic tanks followed by soak pits and sewage treatment plant. Treated domestic effluent is 100 % recycled for firefighting, used for gardening and green belt development.
v)	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.	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. 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.

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.	The detail of Solid waste and its utilization is as following-

S.N.	Type of Waste	Disposal/ Utilization
1.	Fly Ash (CPP)	In house for Bricks & Paver blocks Manufacture / Outside bricks manufacture & filling low lying area.
2.	Bed Ash (CPP)	Landfill
3.	Dust from Bag Filter (DRP & SMS)	Reused at sinter.
4.	DRP Sludge	Reused at Sinter Plant
5.	Mill Scale (Rolling Mill)	Reused at Sinter Plant
6.	EAF & SS Refining Convertor Slag ((SMS)	Landfill & Reused for manufacturing of Paver Blocks
7.	Iron/Steel/Scrap/Rejects Billets (SMS/Rolling Mill)	Recycle at SMS
8.	Grinder Waste (SMS/Rolling Mill)	Recycle at SMS
9.	Coal Rejected Stone & Shell (Coal Washery)	Landfill
10.	Granulated MBF Slag	By Sale to Cement manufacture.
11.	Granulated Residue at MBF Gas Cleaning plant	Reused at Sinter plant.
12.	Coke Fines (MBF Plant)	Reused at Sinter plants
13.	Iron Ore Fines & Sinter (DRI & MBF Plant)	Reused at Sinter plants
14.	Dusts/Sludge (ETP & WTP)	Reused at Sinter plants
15.	Hot returned ore (Sinter Plant)	Reused at Sinter plants
16.	Removed Dust (DRI Plant & Sinter Plant)	Reused at Sinter plants

vii)	Mill scale shall be reused in Sinter plant, ESP fly ash shall be made available to the cement pants and brick making plants whereas bottom ash shall be disposed off in a suitably designed landfill as per CPCB guidelines to present leaching to the sub-soil and underground aquifer. Solid waste generated in the form of Iron ore fines, blast furnace slag, BF scrap scales from slab caster and scales from steel mill will be sold to the scrap dealers except for BF slag which will be sold to the cement manufacturers.	Mill scale is used in the sinter plant. Fly ash is used in brick making plants and bottom ash is disposed off at designated landfill. BF Slag is disposed off by sale to cement manufacturers. Iron ore fines, BF Scrap scales from slab caster and scales from steel mill are used at Sinter plant.
viii)	The company shall be developing surface water harvesting structure to harvest the rain water for utilization in the lean season besides recharging the ground water table.	Rain water harvesting ponds are existing in the plant premises and channels are provided for collection of rain water of the plant into the pond. The collected rain water is utilized for various plant activities in lean season. Also it helps in recharge of ground water table.
ix)	Green belt shall be developed in at least 71.5 ha area within and around the plant premises as per the CPCB guidelines in consultation with DFO.	Sunflag Iron & Steel Co. Ltd. has 200 Ha of land covering factory, colony and other amenities. Presently, land available for green belt is about 72 Ha and green belt has covered the maximum portion of land. From the last two decade, factory is regularly carrying out tree plantation and green belt development within the factory and colony premises as per CPCB guidelines. Till date, the factory has planted approx 4,93,594 trees covering 22 varieties such as Neem, Pipal, Casia, Mango, Gulmohor, Eucalyptus, Khair, Chichwa, Shisam, Ashoka, Karanj, Teak, Jamun, Palas, Hiwar, Dhaora, Bamboo, Royal Palm, Coconut, Guahava, etc. and the survival rate is about 96 %. The green belt is spread in and around the plant area.
x)	Occupational health Surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	Medical examinations of workers are carried out regularly. A dispensary with regular medical practitioner and auxiliary nursing facility is available in the plant premises. Additionally, a panel of doctors regularly visits to the factory for checkup the heath of workers & staff, the records of same is being maintained.

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

(B) General Conditions

SN	Conditions	Compliance
i	The project authorities must strictly adhere to the stipulations made by the Maharashtra Pollution Control Board (MPCB) and the State Government.	Consent to Operate is obtained from Maharashtra Pollution Control Board for existing set-up and it is valid upto 31-05-2022. Compliance of the stipulations indicated in the MPCB Consent to Operate, are regularly complied.
ii	No further expansion or modifications in the plant should be carried out without prior approval of the Ministry of Environment and Forests.	Factory will not carry out further expansion or modification in the plant without prior approval of Ministry of Environment and Forests.
iii	At least four ambient air quality monitoring stations should be established in the downward direction as well as where maximum ground level concentration of SPM, SO_2 and NOx are anticipated in consultation with the MPCB. Data on ambient air quality and stack emission should be regularly submitted to this Ministry including its Regional office at Bhopal and MPCB/CPCB once in six months.	Factory has an established Four Ambient Air Quality Monitoring Stations in consultation with MPCB. Factory is regularly monitoring and analyzing pollution sources. The programme includes stack sampling, ambient air quality monitoring, noise level measurement , fugitive dust monitoring and treated effluent at various locations. The plant is regularly submitting the monitored data to MPCB. Please refer **Annexure - 1 (A to E).**

iv	Industrial waste water shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May, 1993 and 31st December, 1993 or as amended form time to time the treated waste water shall be utilized for plantation purpose.	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. For CPP effluent, a neutralization pit is provided. At Centralized Pickling Plant, separate effluent treatment plant is provided with units as Collection cum neutralization Tank for Spent Acid, Collection cum Neutralization Tank for Rinse Water, Lime Solution Tank, Gravity Sand Filters, Filter press, Clariflocculator and treated Effluent Tank. Finally treated effluent is being recycle/reused for cleaning of pickling product. At MBF, water is sprayed in venture scrubbers used for cleaning MBF gases. The water from scrubbers is collected in thickener. The clear overflow from the thickener is recycled back for scrubbing. The thickened sludge from the bottom is dewatered in vacuum drier and the disposed water is sent back to the thickener. Dried Sludge is being use in the sinter plant. Effluent discharge from MBF is nil.
v	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.	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 & 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. Oxygen & Nitrogen are stored as per Explosive Rules and all the conditions will be followed meticulously. As per Hazardous Waste (MH &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 & disposal of hazardous wastes generated at factory is carried as per MPCB directions.

vi	The overall noise levels in and around the plant area shall be kept well within the standards (85 dBA) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels should conform to the standards prescribed under EPA Rules, 1989 siz. 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 **Annexure – 1 C.**
vii	The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA / EMP report. Further, the company must undertake socio- economic development activities in the surrounding villages like community development programmes, educational programmes, drinking water supply and heath 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 socioeconomic development activities in the surrounding villages like community development programmes, educational programmes, Skill development programmes for unemployed youth & women's, drinking water supply, and heath checkup camps.
viii	As committed, Project authorities shall provide funds of Rs. 20.54 Crores recurring and non-recurring to implement the conditions stipulated by the Ministry of Environment an Forest as well as the State Government along with the implementation schedule for all the conditions stipulated herein. The funds so provided should not be diverted for any other purpose.	In order to implement the conditions stipulated by the Ministry of Environment and Forests, Govt. of India as well as the Maharashtra Government, factory has carried out capital expenditure on pollution control facilities and providing adequate funds for capital & recurring expenditure.
ix	The regional office of this Ministry at Bhopal/ MPCB/ CPCB will monitor the stipulated conditions. A six monthly compliance report and the monitored date 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 http:/ensfor.nic.in. 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 implementthese 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 1st October 2019 to 31st March 2020..

(A) SPECIFIC CONDITIONS :

i)	The project proponent shall install 24x7 air monitoring devices to monitor air emissions, as provided by the CPCB and submit report to Ministry and its Regional Office.	Complied.
ii)	The canal passing through the project site should be fenced on both the sides, leaving a passage for maintenance related activities by the concerned department. No effluent should be discharged into the canal. No water from the canal should be abstracted without permission.	Complied.
iii)	The natural drainage passing through the site should not be disturbed or diverted and no solid waste or liquid effluent should be discharged into the drain.	Complied.
iv)	A statement on carbon budgeting including the quantum of equivalent Co2 being emitted by the existing plant operations, the amount of carbon sequestered annually by the existing green belt and the proposed green belt and the quantum of equivalent Co2 that will be emitted due to the proposed expansion shall be prepared by the project proponent and submitted to the Ministry and the Regional Office of the Ministry. This shall be prepared every year by the project proponent. The first such budget shall be prepared within a period of 6 months and subsequently it should be prepared every year.	Complied, Report for 2017-18 already submitted vide letter No. SF: Utility :Pollution: 2392 dtd. 27.10.2017. Report for 2018-19 also submitted vide letter no.MoEFCC/18-19/2466A dtd 24.10.2019.

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/Nm3 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 as per guidelines, the effluent is treated and reused as per guidelines, Revised water balance statement was already submitted vide Annexure-2 of letter No.SF:Utility : Pollution : 2392 dtd 27.10.17.
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 blockedor shall be any other type of pucca road. The roads shall be regularly cleaned with mechanical sweepers. A 3-tier avenue plantation using native species shall be developed along the roads. Facilities for parking of trucks carrying raw coal from the linked coalmines shall be created within the Unit.	Complied.
x)	The Standards issued by the Ministry vide G.S.R. No. 277(E) dated 31st March, 2012 regarding integrated iron and steel plant shall be followed.	Standard followed as per MoEFCC /SPCB Guidelines.
xi)	The National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 shall be followed.	Standard followed as per MoEFCC / SPCB Guidelines.
xii)	Gaseous emission levels including secondary fugitive emissions from all the sources shall be controlled within the latest permissible limits issued by the Ministry vide G.S.R. 414(E) dated 30th May, 2008 and regularly monitored. Guidelines / Code of Practice issued by the CPCB shall be followed.	Emission level controlled within latest permissible limits as per MoEFCC/CPCB Guidelines.
xiii)	Vehicular pollution due to transportation of raw material and finished product shall be controlled. Proper arrangements shall also be made to control dust emissions during loading and unloading of the raw material and finished product.	Complied, arrangement has been made to control dust emission during loading & Unloading of trucks.
xiv)	'Zero' effluent discharge shall be strictly followed and no waste water shall be discharged outside the premises. The calculations to this effect shall be submitted.	Complied, achieved zero effluent discharge.

xv)	Regular monitoring of in-fluent and effluent surface, sub-surface and ground water shall be ensured and treated waste water shall meet the norms prescribed by the State Pollution Control Board (SPCB) or described under the E(P) Act whichever are more stringent.	Complied, regular monitoring of effluent & water is carried out as per guidelines, treated waste water is within norms of prescribe standard of SPCB & reuse in the process of plant..
xvi)	Proper handling, storage, utilization and disposal of all the solid waste shall be ensured and regular report regarding toxic metal content in the waste material and its composition, end use of solid/hazardous waste shall be submitted to the Ministry's Regional Office, SPCB and CPCB.	Complied.
xvii)	A time bound action plan shall be submitted to reduce solid waste generated due to the project related activities, its proper utilization and disposal.	Complied.
xviii)	Proper utilization of fly ash shall be ensured as per Fly Ash Notification, 1999 and subsequent amendment in 2003 and 2009. All the fly ash shall be provided to cement and brick manufacturers for further utilization and Memorandum of Understanding shall be submitted to the Ministry's Regional Office at Chennai.	At present there is no fly ash generation, as Power plant has not been installed against approval in EC 02.05.2017. Hence this condition will be full filled after installation & commissioning of new Captive Power Plant.
xix)	A Risk and Disaster Management Plan shall be prepared and a copy submitted to the Ministry's Regional Office, SPCB and CPCB within 3 months of issue of environment clearance letter.	Already submitted within three month from issue date of EC, vide letter No.SF:UTI:Pollution : 2374 dtd. 26.07.2017.
xx)	Green belt shall be developed in at least 33% of the project area by planting native and broad leaved species in consultation with local DFO and local communities as per the CPCB guidelines.	Complied .

xxi)	At least 5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on locals need and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office. Implementation of such program shall be ensured by constituting a Committee comprising of the proponent, representatives of village Panchayat and District Administration. Action taken report in this regard shall be submitted to the Ministry's Regional Office.	Complied, Enterprise Social Commitment work has been taken based on local need as per requirement of Gram / Village panchayat and District administration
xxii)	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.	The Budget for spending under CSR activities for the year 2018-19 was approved by the Board of Directors of the Company at its meeting held on 28th May, 2018 of Rs. 2,44,54,098/- as per the CSR Policy of the Company. The details of CSR expenditure incurred has been published in the Annual Report 2018-19. 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 net average profits of the Company for immediately three (3) preceding financial years. 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 Please refer **Annexure 2**

xxiii)	The Company shall submit within three months their policy towards Corporate Environment Responsibility which shall inter-alia address (i) Standard operating process/procedure to being into focus any infringement/deviation/ violation of environmental or forest norms/conditions, (ii) Hierarchical system or Administrative order of the Company to deal with environmental issues and ensuring compliance to the environmental clearance conditions and (iii) System of reporting of non-compliance/violation environmental norms to the Board of Directors of the company and/or stakeholders or shareholders.	Complied, Already submitted policy towards Corporate Environment Responsibility within three month from EC issue date along with quarterly compliance report vide letter No. SF: UTI: Pollution: 2374 dtd 26.07.2017.
xxiv)	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.	Complied .
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, Instead of Bio Gas plant, we make manure from Kitchen waste through composting machine & manure is being used for Nursery / Garden.
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 19th May, 1993 and 31st December, 1993 or as amended form 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 siz. 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 heath care etc.	Complied, SISCO comply with the recommendations made by the Public Hearing Panel for expansion project. Compliance of the safeguards recommended in the EIA/EMP report is a regular feature of the plant. The company is undertaking socioeconomic development activities in the surrounding villages like community development programmes, educational programmes, Skill development programmes for unemployed youth & women's, drinking water supply, and heath checkup camps.
ix)	Requisite funds shall be earmarked towards capital cost and recurring cost/annum for environment pollution control measures to implement the conditions stipulated by the Ministry of Environment, Forest and Climate Change (MoEFCC) as well as the State Government. An implementation schedule for implementing all the conditions stipulated herein shall be submitted to the Regional Office of the Ministry at Nagpur. The funds so provided shall not be diverted for any other purpose.	Refer Annexure 2

x)	A copy of clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parishad/Municipal Corporation, Urban Local Body and the local NGO, if any, from whom suggestions/representations, if any, were received while processing the proposal. The clearance letter shall also be put on the web site of the company by the proponent.	Complied. Already submitted along with quarterly compliance report vide letter No. SF: UTI: Pollution: 2374 dtd. 26.07.2017
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 http:/envfor.nic.in. 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 , already submitted along with quarterly compliance report vide letter No. SF: UTI: Pollution: 2374 dtd. 26.07.2017.
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.	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. Accordingly, financial closure for the entire projects are yet to be completed. 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.
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.

ANNEXURE–1. (A)

STACK EMISSION STATUS

Location :S-3 (BSM)

Stack Identity	**S-3 (BSM)**
Stack attached to	Reheating Furnace of Bar & Section Mill
Material of construction	Mild Steel
Stack height above ground level	65.0 mtr.
Stack shape at top	Circular
Stack diameter	1.5 mtr
Type of fuel	Furnace Oil & BF Gas

Results of Analysis

Sr. No.	Date of Monitoring	Temp. (°C)	Velocity of Flue Gas (m/sec)	Flow Rate of Flue Gas (Nm^3/Hr)	Total Particulate Matter (mg/Nm^3)	Sulphur Dioxide (as SO_2) (Kg/day)	Oxides of Nitrogen (as NO_2) (mg/Nm^3)
1	01-10-2019	298	10.3	33238.7	35.5	628.2	139.7
2	08-10-2019	306	10.2	32686.6	38.8	582.6	120.0
3	14-10-2019	294	10.1	32759.4	23.1	465.0	134.3
4	22-10-2019	287	10.4	34385.3	22.6	499.8	143.7
5	28-10-2019	297	10.3	33233.3	19.5	633.8	140.1
6	04-11-2019	307	10.6	33710.6	33.6	580.0	226.1
7	12-11-2019	314	11.0	34690.3	38.6	628.5	218.9
8	18-11-2019	305	10.4	33125.2	31.1	989.0	244.0
9	25-11-2019	312	10.7	33891.8	38.3	985.8	256.3
10	02-12-2019	304	10.9	34843.0	37.6	1067.9	297.9
11	09-12-2019	300	10.5	33928.8	46.6	1050.4	328.2
12	16-12-2019	294	10.8	35265.3	43.4	1036.8	353.6
13	26-12-2019	298	11.2	36115.6	36.5	1823.7	430.6
14	04-01-2020	297	10.8	35174.8	42.6	1341.6	365.8
15	09-01-2020	302	10.7	34385.5	43.3	696.8	327.4
16	15-01-2020	310	10.6	33472.1	36.1	812.5	341.3

17	23-01-2020	307	10.7	34026.4	35.4	611.7	324.0
18	27-01-2020	316	10.2	32005.1	35.8	547.6	327.6
19	04-02-2020	284	9.43	31229.8	35.7	1741.2	324.0
20	10-02-2020	297	11.1	36017.6	39.2	745.8	355.9
21	19-02-2020	307	11.3	35999.4	42.2	1466.4	335.1
22	26-02-2020	318	10.4	32489.7	44.0	1433.9	350.2
23	02-03-2020	310	10.4	32872.3	33.8	757.4	317.8
24	11-03-2020	304	10.6	33979.9	47.1	1644.6	381.7
25	16-03-2020	307	10.5	33264.9	37.3	871.1	327.6
Method		IS 11255 (Part 3): 2008 RA 2008	IS 11255 (Part 3): 2008 RA 2008	IS 11255 (Part 3): 2008 RA 2008	IS 11255 (Part 1): 1985 RA 2009	IS 11255 (Part 2):1985 RA 2014	IS 11255 (Part 7):2005 RA 2017

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

STACK EMISSION STATUS

Location:-SMS-Secondary

Stack Identity	SMS-Secondary
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_2 is used for melting

Results of Analysis

Sr. No.	Date of Monitoring	Temp. (°C)	Velocity of Flue Gas (m/sec)	Flow Rate of Flue Gas (Nm^3/Hr)	Total Particulate Matter (mg/ Nm^3)
1	03-10-2019	97	12.3	505077.5	11.2
2	11-10-2019	92	12.4	517352.6	14.1
3	15-10-2019	89	12.0	502827.9	16.9
4	23-10-2019	94	12.1	500100.4	15.8
5	28-10-2019	86	11.8	498995.1	27.4
6	04-11-2019	91	11.5	480879.4	22.5
7	14-11-2019	98	11.8	484100.2	23.8
8	20-11-2019	87	11.5	487505.2	23.0
9	26-11-2019	93	12.2	505200.4	31.3
10	02-12-2019	99	11.5	468946.4	28.4
11	10-12-2019	97	11.6	477593.4	26.7
12	18-12-2019	87	11.7	496352.7	37.3
13	25-12-2019	94	11.9	493879.2	29.5
14	04-01-2020	97	12.0	493554.4	37.9
15	08-01-2020	82	10.4	445287.9	21.5
16	18-01-2020	94	11.7	485220.5	26.5
17	23-01-2020	91	11.6	483384.0	22.8

18	29-01-2020	86	11.5	489225.8	21.4
19	05-02-2020	87	11.8	497534.9	22.2
20	10-02-2020	91	12.3	513333.6	20.1
21	20-02-2020	96	12.4	511696.0	34.1
22	25-02-2020	87	11.5	485795.0	21.5
23	05-03-2020	95	11.8	486325.3	29.1
24	09-03-2020	97	11.9	486537.1	27.5
25	18-03-2020	85	12.3	522330.2	24.7
Method		IS 11255 (Part 3): 2008 RA 2008	IS 11255 (Part 3): 2008 RA 2008	IS 11255 (Part 3): 2008 RA 2008	IS 11255 (Part 1): 1985 RA 2009

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

STACK EMISSION STATUS

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

Stack Identity	**S-2 (CPP-FBC Boiler)**
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)	Flow Rate of Flue Gas (Nm^3/Hr)	Total Particulate Matter (mg/Nm^3)	Sulphur Dioxide (as SO_2) (Kg/day)	Oxides of Nitrogen (as NO_2) (mg/Nm^3)
1	04-10-2019	109	8.19	44996.5	24.4	532.8	224.7
2	09-10-2019	112	8.31	45301.3	15.8	518.4	247.0
3	15-10-2019	114	8.54	46313.8	26.7	543.1	253.3
4	24-10-2019	110	8.48	46467.5	18.3	492.2	234.4
5	29-10-2019	119	9.40	50322.1	21.6	536.1	226.5
6	05-11-2019	120	8.55	45657.1	28.2	964.1	274.8
7	14-11-2019	109	8.59	47193.5	35.4	922.4	284.2
8	20-11-2019	117	8.64	46478.1	27.5	905.7	283.9
9	26-11-2019	132	8.51	44095.8	33.3	943.2	317.6
10	03-12-2019	117	8.47	45579.0	32.6	1188.3	325.9
11	10-12-2019	124	9.11	48161.3	38.3	2833.1	583.1
12	17-12-2019	132	8.92	46223.4	37.3	2053.6	526.7
13	27-12-2019	127	8.59	45067.9	44.3	2724.0	534.8
14	08-01-2020	106	8.52	47174.4	33.4	3306.9	568.9
15	16-01-2020	117	8.43	45363.8	30.4	3470.1	583.9

16	28-01-2020	108	8.17	45001.4	29.1	2078.9	533.6
17	03-02-2020	102	7.67	42926.2	40.6	1096.5	582.0
18	12-02-2020	112	8.61	46933.5	29.6	2168.2	542.7
19	21-02-2020	117	8.04	43265.7	38.0	2145.6	527.4
20	28-02-2020	108	8.56	47148.9	44.1	2178.2	545.2
21	03-03-2020	115	8.45	45705.2	43.7	2024.7	581.3
22	12-03-2020	120	8.38	44691.2	38.5	1571.6	554.7
23	16-03-2020	110	8.83	48383.4	40.2	2118.2	535.1
	Method	IS 11255 (Part 3): 2008 RA 2008	IS 11255 (Part 3): 2008 RA 2008	IS 11255 (Part 3): 2008 RA 2008	IS 11255 (Part 1): 1985 RA 2009	IS 11255 (Part 2):1985 RA 2014	IS 11255 (Part 7):2005 RA 2017

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

STACK EMISSION STATUS

Location:-S-10 (MBF Stoves)

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

Results of Analysis

Sr. No.	Date of Monitoring	Temp. (°C)	Velocity of Flue Gas (m/sec)	Flow Rate of Flue Gas (Nm^3/Hr)	Total Particulate Matter (mg/Nm^3)	Sulphur Dioxide (as SO_2) (Kg/day)	Oxides of Nitrogen (as NO_2) (mg/Nm^3)
1	03-10-2019	145	12.0	94524.0	20.0	588.2	132.9
2	09-10-2019	137	12.6	101084.1	12.5	507.7	101.6
3	15-10-2019	142	13.2	104523.5	12.6	483.1	150.5
4	23-10-2019	138	11.9	95009.3	18.5	481.1	150.1
5	30-10-2019	134	11.9	96584.9	17.6	595.9	134.4
6	05-11-2019	142	12.8	101206.6	25.5	451.1	177.1
7	13-11-2019	154	12.6	97282.2	28.2	528.9	184.5
8	21-11-2019	162	12.7	95947.8	33.2	466.7	181.9
9	27-11-2019	157	12.4	94771.0	36.4	528.5	235.7
10	04-12-2019	148	12.1	94389.2	38.5	583.2	268.6
11	12-12-2019	137	11.7	93565.5	40.1	718.9	242.1
12	17-12-2019	142	12.5	99148.5	34.8	1233.2	316.5
13	27-12-2019	134	11.7	94571.0	33.8	1247.9	261.0
14	07-01-2020	142	12.5	98586.1	39.1	1408.5	348.5
15	15-01-2020	152	12.6	97810.5	35.7	1445.7	361.5
16	28-01-2020	148	11.6	90879.8	32.2	1331.6	328.6

17	07-02-2020	146	11.5	90475.7	27.8	1144.7	336.1
18	12-02-2020	152	12.3	94654.3	32.1	1465.3	339.6
19	20-02-2020	142	12.1	95510.5	40.8	1534.3	307.4
20	26-02-2020	156	12.2	93392.1	40.3	1565.0	139.7
21	03-03-2020	145	12.5	98205.6	44.7	1562.4	378.9
22	14-03-2020	148	12.4	96333.6	38.4	1187.2	347.1
23	17-03-2020	155	13.4	102869.7	45.3	1598.7	382.8
Method		IS 11255 (Part 3): 2008 RA 2008	IS 11255 (Part 3): 2008 RA 2008	IS 11255 Part 3): 2008 RA 2008	IS 11255 (Part 1): 1985 RA 2009	IS 11255 (Part 2):1985 RA 2014	IS 11255 (Part 7):2005 RA 2017

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

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)	Flow Rate of Flue Gas (Nm^3/Hr)	Total Particulate Matter (mg/Nm^3)	Sulphur Dioxide (as SO_2) (Kg/day)	Oxides of Nitrogen (as NO_2) (mg/Nm^3)
1	07-10-2019	158	11.8	201631.6	38.4	208.4	136.3
2	17-10-2019	164	11.6	196151.5	36.2	198.3	135.9
3	25-10-2019	152	11.7	203615.7	46.4	219.8	113.2
4	31-10-2019	168	11.5	192715.3	28.1	214.5	135.3
5	06-11-2019	154	12.1	209728.7	65.6	208.6	166.5
6	15-11-2019	162	12.5	212838.8	53.4	184.5	157.8
7	22-11-2019	158	12.2	209488.1	68.4	130.2	174.9
8	28-11-2019	146	10.5	184693.6	76.3	137.2	187.2
9	05-12-2019	168	10.8	181839.1	71.0	167.0	252.7
10	11-12-2019	152	11.6	202221.6	67.9	207.7	245.3
11	19-12-2019	145	11.8	208779.2	52.7	237.4	271.4
12	28-12-2019	148	11.2	196963.8	83.2	219.0	246.6
13	06-01-2020	171	12.5	208670.9	57.7	261.8	243.7
14	17-01-2020	154	11.6	200405.2	57.9	179.2	168.9

15	24-01-2020	162	11.4	194170.5	71.5	120.2	149.9
16	30-01-2020	148	11.1	195193.0	74.5	184.8	142.3
17	06-02-2020	135	11.3	203773.8	46.4	208.4	227.5
18	13-02-2020	147	11.1	194798.0	50.2	255.3	196.8
19	22-02-2020	140	10.5	187029.7	75.8	270.0	214.7
20	27-02-2020	155	11.4	196150.3	73.2	266.6	213.8
21	04-03-2020	162	12.1	204523.3	72.9	261.2	241.6
22	13-03-2020	167	12.4	207220.6	74.8	263.7	248.2
23	19-03-2020	158	12.2	209496.7	73.6	265.4	245.6
Method		IS 11255 (Part 3): 2008 RA 2008	IS 11255 (Part 3): 2008 RA 2008	IS 11255 (Part 3): 2008 RA 2008	IS 11255 (Part 1): 1985 RA 2009	IS 11255 (Part 2):1985 RA 2014	IS 11255 (Part 7):2005 RA 2017

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

STACK EMISSION STATUS

Location:-S-24 (Sinter Plant)

Stack Identity	**S-24 (Sinter Plant)**
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)	Flow Rate of Flue Gas (Nm^3/Hr)	Total Particulate Matter (mg/Nm^3)	Sulphur Dioxide (as SO_2) (Kg/day)	Oxides of Nitrogen (as NO_2) (mg/Nm^3)
1	07-10-2019	134	9.61	109707.4	48.7	75.0	112.2
2	17-10-2019	128	9.67	112038.1	37.9	56.1	154.2
3	25-10-2019	138	9.55	107957.1	33.7	53.2	123.6
4	31-10-2019	142	9.36	104790.8	33.3	54.8	116.7
5	06-11-2019	137	9.53	107992.3	55.9	86.1	143.1
6	15-11-2019	128	8.80	101959.5	61.2	68.5	144.0
7	22-11-2019	142	8.39	93923.5	62.1	61.5	157.3
8	28-11-2019	134	8.66	98850.3	58.4	76.4	130.3
9	05-12-2019	144	9.74	108520.6	74.7	74.9	205.3
10	11-12-2019	141	9.13	102457.2	81.4	70.8	207.4
11	20-12-2019	138	9.06	102409.6	66.8	80.1	181.7
12	28-12-2019	139	9.93	111980.3	60.2	80.5	198.6
13	06-01-2020	146	9.76	108221.5	71.1	79.9	205.2
14	08-01-2020	124	10.7	125578.8	57.3	86.9	171.2

15	17-01-2020	138	9.26	104678.7	45.4	69.4	165.8
16	24-01-2020	140	9.46	106426.1	62.1	39.3	147.6
17	30-01-2020	132	8.98	103018.8	69.3	66.1	144.8
18	06-02-2020	122	9.06	106570.8	64.9	76.4	162.2
19	13-02-2020	128	8.62	99869.9	36.9	81.4	164.0
20	22-02-2020	130	8.70	100292.5	44.7	80.3	186.6
21	27-02-2020	138	9.17	103660.0	79.5	86.0	186.9
22	04-03-2020	132	8.77	1066.3.1	55.2	78.8	179.3
23	13-03-2020	138	8.63	97546.6	57.2	84.2	182.3
24	19-03-2020	140	8.93	100450.1	59.3	87.4	189.1
Method		IS 11255 (Part 3): 2008 RA 2008	IS 11255 (Part 3): 2008 RA 2008	IS 11255 (Part 3): 2008 RA 2008	IS 11255 (Part 1): 1985 RA 2009	IS 11255 (Part 2):1985 RA 2014	IS 11255 (Part 7):2005 RA 2017

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

STACK EMISSION STATUS

Location:-S-1A (ASM)

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

Results of Analysis

Sr. No.	Date of Monitoring	Temp. (°C)	Velocity of Flue Gas (m/sec)	Flow Rate of Flue Gas (Nm^3/Hr)	Total Particulate Matter (mg/Nm^3)	Sulphur Dioxide (as SO_2) (Kg/day)	Oxides of Nitrogen (as NO_2) (mg/Nm^3)
1	01-10-2019	278	5.11	9201.2	21.1	87.2	106.6
2	16-10-2019	274	5.46	9903.0	25.5	80.1	167.9
3	22-10-2019	285	5.73	10187.9	23.7	76.5	143.8
4	08-11-2019	257	6.73	12597.6	29.5	265.1	194.1
5	13-11-2019	284	5.63	10028.0	28.7	296.5	186.0
6	21-11-2019	276	5.84	10553.8	31.2	267.5	209.1
7	25-11-2019	268	7.14	13093.5	35.5	353.4	284.1
8	04-12-2019	253	4.61	8695.5	34.0	128.9	267.9
9	12-12-2019	276	6.21	11222.3	38.8	448.6	385.2
10	19-12-2019	170	6.47	14489.2	34.8	422.2	426.9
11	26-12-2019	168	6.24	14038.1	31.5	638.0	367.4
12	01-01-2020	184	7.19	15608.3	36.3	277.8	356.8
13	07-01-2020	238	7.11	13804.2	37.4	265.0	335.8
14	22-01-2020	278	7.24	13035.6	31.3	215.7	331.7

15	27-01-2020	284	7.73	13767.7	30.3	139.1	297.2
16	07-02-2020	274	7.74	14037.7	40.7	296.6	286.1
17	11-02-2020	286	7.25	12866.9	31.4	165.6	263.2
18	19-02-2020	296	7.03	12257.6	41.5	156.8	247.0
19	25-02-2020	278	5.27	9489.0	36.5	233.7	244.4
20	02-03-2020	258	7.05	13171.1	35.6	218.1	248.7
21	11-03-2020	285	7.54	13404.8	49.1	481.6	356.1
22	18-03-2020	264	7.57	13984.8	40.8	242.7	293.1
Method		IS 11255 (Part 3): 2008 RA 2008	IS 11255 (Part 3): 2008 RA 2008	IS 11255 Part 3): 2008 RA 2008	IS 11255 (Part 1): 1985 RA 2009	IS 11255 (Part 2):1985 RA 2014	IS 11255 (Part 7):2005 RA 2017

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

STACK EMISSION STATUS

Location:-S-34 (Reheating Furnace-3)

Stack Identity	S-34 (Reheating Furnace-3)
Stack attached to	Reheating Furnace Blooming Mill
Material of construction	Mild Steel
Stack height above ground level	70.0 mtr.
Stack shape at top	Circular
Stack diameter	2.0 mtr
Type of fuel	Furnace Oil

Sr. No.	Date of Monitoring	Temp. (°C)	Velocity of Flue Gas (m/sec)	Flow Rate of Flue Gas (Nm^3/Hr)	Total Particulate Matter (mg/Nm^3)	Sulphur Dioxide (as SO_2) (Kg/day)	Oxides of Nitrogen (as NO_2) (mg/Nm^3)
1	05-10-2019	287	10.5	61484.8	13.4	445.4	175.8
2	08-10-2019	301	10.5	59871.7	15.8	526.3	210.9
3	19-10-2019	310	11.8	66535.5	15.5	510.0	162.8
4	24-10-2019	318	11.5	63862.0	12.7	381.2	144.2
5	29-10-2019	312	10.8	60478.7	23.7	524.2	207.0
6	12-11-2019	302	11.4	64894.2	31.4	745.0	215.6
7	23-11-2019	309	11.0	62256.2	33.8	823.8	263.0
8	27-11-2019	314	10.5	58822.7	35.2	833.2	234.2
9	03-12-2019	314	11.3	63573.5	32.3	2342.6	386.3
10	09-12-2019	312	11.2	63053.7	34.3	2261.4	417.7
11	24-12-2019	302	10.7	61190.9	38.1	2224.8	435.1
12	01-01-2020	268	10.9	66553.6	38.2	1478.5	475.3
13	09-01-2020	312	11.2	62719.1	38.9	1307.3	456.3

14	16-01-2020	302	10.5	59707.4	42.4	980.3	428.2
15	22-01-2020	297	10.4	59771.7	41.1	1157.4	416.5
16	29-01-2020	309	10.8	61073.0	32.4	1185.9	459.1
17	05-02-2020	294	10.5	60553.1	45.1	1258.1	419.1
18	11-02-2020	307	10.7	61002.6	25.9	1080.4	447.0
19	21-02-2020	315	10.7	60116.1	42.2	1228.6	436.5
20	05-03-2020	297	10.1	58392.6	40.7	1224.5	439.3
21	09-03-2020	295	10.6	61002.6	44.6	1781.6	477.6
22	17-03-2020	312	10.5	60116.1	35.1	1042.7	408.4
Method		IS 11255 (Part 3): 2008 RA 2008	IS 11255 (Part 3): 2008 RA 2008	IS 11255 (Part 3): 2008 RA 2008	IS 11255 (Part 1): 1985 RA 2009	IS 11255 (Part 2):1985 RA 2014	IS 11255 (Part 7):2005 RA 2017

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

STACK EMISSION STATUS

Location:-DRP-2 Main

Stack Identity	**DRP-2 Main**
Stack attached to	ESP to WHRSG of Kiln (DRP-2)
Material of construction	Mild Steel
Stack height above ground level	60.0 mtr.
Stack shape at top	Circular
Stack diameter	2.8 mtr
Type of fuel	Coal

Results of Analysis

Sr. No.	Date of Monitoring	Temp. (°C)	Velocity of Flue Gas (m/sec)	Flow Rate of Flue Gas (Nm^3/Hr)	Total Particulate Matter (mg/Nm^3)	Sulphur Dioxide (as SO_2) (Kg/day)	Oxides of Nitrogen (as NO_2) (mg/Nm^3)
1	19-12-2019	142	9.76	151155.7	33.0	2463.2	283.3
2	20-01-2020	138	8.73	136523.3	41.3	2854.4	357.9
3	06-02-2020	146	9.47	145260.3	41.0	2828.5	326.3
4	20-03-2020	148	8.99	137244.4	36.5	2217.8	282.7
Method		IS 11255 (Part 3): 2008 RA 2008	IS 11255 (Part 3): 2008 RA 2008	IS 11255 (Part 3): 2008 RA 2008	IS 11255 (Part 1): 1985 RA 2009	IS 11255 (Part 2):1985 RA 2014	IS 11255 (Part 7):2005 RA 2017

Norms: **Total Particulate Matter (PM)- 50 mg/Nm^3.**
Sulphur Dioxide – 4520 Kg/Day.

STACK EMISSION STATUS

Location:- Flux Screening (Sinter Plant)

Stack Identity	**Flux Screening (Sinter Plant)**
Stack attached to	Flux Screening
Material of construction	Mild Steel
Stack height above ground level	20.0 mtr.
Stack shape at top	Circular
Stack diameter	1.1 mtr
Type of fuel	NA

Results of Analysis

Sr. No.	Date of Monitoring	Temp. (°C)	Velocity of Flue Gas (m/sec)	Flow Rate of Flue Gas (Nm^3/Hr)	Total Particulate Matter (mg/Nm^3)
1	10-10-2019	40	4.68	14836.2	25.0
2	18-10-2019	39	4.31	13706.6	25.4
3	26-10-2019	42	5.87	18490.5	29.4
4	07-11-2019	40	6.14	19465.4	21.6
5	16-11-2019	42	5.78	18207.0	23.2
6	29-11-2019	44	5.56	17403.5	29.6
7	06-12-2019	38	5.69	18154.5	27.1
8	13-12-2019	36	5.52	17725.6	34.9
9	10-01-2020	40	5.99	18989.6	26.8
10	31-01-2020	38	5.97	19048.1	42.2
11	14-02-2020	41	5.90	18644.6	20.1
12	28-02-2020	37	5.70	18245.3	22.5
13	06-03-2020	38	5.77	18409.8	23.4
Method		IS 11255 (Part 3): 2008 RA 2008	IS 11255 (Part 3): 2008 RA 2008	IS 11255 (Part 3): 2008 RA 2008	IS 11255 (Part 1): 1985 RA 2009

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

STACK EMISSION STATUS

Location:-Flux Crusher Sinter Plant

Stack Identity	**Flux Crusher Sinter Plant**
Stack attached to	Flux Crusher Sinter Plant
Material of construction	Mild Steel
Stack height above ground level	15.0 mtr.
Stack shape at top	Circular
Stack diameter	1.1 mtr
Type of fuel	NA

Results of Analysis

Sr. No.	Date of Monitoring	Temp. (°C)	Velocity of Flue Gas (m/sec)	Flow Rate of Flue Gas (Nm^3/Hr)	Total Particulate Matter (mg/Nm^3)
1	10-10-2019	32	3.49	11352.7	10.4
2	18-10-2019	37	3.27	10465.6	19.6
3	26-10-2019	39	3.52	11193.4	12.4
4	07-11-2019	37	3.86	12353.4	23.5
5	16-11-2019	36	3.61	11591.2	25.4
6	29-11-2019	34	3.71	11989.7	26.4
7	06-12-2019	36	3.77	12104.6	28.6
8	13-12-2019	33	3.49	11315.7	28.7
9	10-01-2020	32	4.02	13076.7	27.7
10	31-01-2020	34	3.83	12377.7	22.8
11	14-02-2020	35	3.54	11403.3	22.4
12	28-02-2020	34	3.95	12765.7	21.6
13	06-03-2020	34	4.14	13370.6	25.8
Method		IS 11255 (Part 3): 2008 RA 2008	IS 11255 (Part 3): 2008 RA 2008	IS 11255 (Part 3): 2008 RA 2008	IS 11255 (Part 1): 1985 RA 2009

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

STACK EMISSION STATUS

Location:-Product House (DRP-2)

Stack Identity	**Product House (DRP-2)**
Stack attached to	Product House
Material of construction	Mild Steel
Stack height above ground level	30.0 mtr.
Stack shape at top	Circular
Stack diameter	1.11 mtr
Type of fuel	NA

Results of Analysis

Sr. No.	Date of Monitoring	Temp. (°C)	Velocity of Flue Gas (m/sec)	Flow Rate of Flue Gas (Nm^3/Hr)	Total Particulate Matter (mg/ Nm^3)
1	25-12-2019	38	14.5	47293.5	51.7
2	20-01-2020	37	16.5	53780.9	43.1
3	17-02-2020	42	16.5	53092.0	34.1
4	20-03-2020	37	15.7	51276.2	32.7
Method		IS 11255 (Part 3): 2008 RA 2008	IS 11255 (Part 3): 2008 RA 2008	IS 11255 (Part 3): 2008 RA 2008	IS 11255 (Part 1): 1985 RA 2009

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

STACK EMISSION STATUS

Location: -Charbin (DRP-2)

Stack Identity	Charbin (DRP-2)
Stack attached to	Char bin
Material of construction	Mild Steel
Stack height above ground level	30.0 mtr.
Stack shape at top	Circular
Stack diameter	0.60 mtr
Type of fuel	NA

Results of Analysis

Sr. No.	Date of Monitoring	Temp. (°C)	Velocity of Flue Gas (m/sec)	Flow Rate of Flue Gas (Nm^3/Hr)	Total Particulate Matter (mg/ Nm^3)
1	24-12-2019	33	7.17	6918.0	42.1
2	21-01-2020	36	7.37	7042.2	34.9
3	17-02-2020	38	7.58	7196.4	33.7
Method		IS 11255 (Part 3): 2008 RA 2008	IS 11255 (Part 3): 2008 RA 2008	IS 11255 (Part 3): 2008 RA 2008	IS 11255 (Part 1): 1985 RA 2009

Norms: **Total Particulate Matter (PM)-100 mg/Nm^3**

STACK EMISSION STATUS

Location: -Coal Crusher (DRP-2)

Stack Identity	Coal Crusher (DRP-2
Stack attached to	Coal Crusher
Material of construction	Mild Steel
Stack height above ground level	30.0 mtr.
Stack shape at top	Circular
Stack diameter	1.30 mtr
Type of fuel	NA

Results of Analysis

Sr. No.	Date of Monitoring	Temp. (°C)	Velocity of Flue Gas (m/sec)	Flow Rate of Flue Gas (Nm^3/Hr)	Total Particulate Matter (mg/Nm^3)
1	23-12-2019	35	11.6	52573.5	48.6
2	21-01-2020	37	11.7	52552.3	48.2
3	18-02-2020	38	11.3	50606.3	25.9
4					
Method		IS 11255 (Part 3): 2008 RA 2008	IS 11255 (Part 3): 2008 RA 2008	IS 11255 (Part 3): 2008 RA 2008	IS 11255 (Part 1): 1985 RA 2009

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

ANNEXURE - 1 (B)

AMBIENT AIR QUALITY STATUS

1.0 Location:- A - 1 (Eklari Gate)

Sr. No.	Month	Date of Monitoring	SO_2	NO_X	PM_{10}	$PM_{2.5}$
			µg/m3	µg/m3	µg/m3	µg/m3
1	Oct--19	01-10-2019 to 02-10-2019	9.24	18.5	81.2	37.2
2		03-10-2019 to 04-10-2019	8.95	17.2	83.7	38.9
3		07-10-2019 to 08-10-2019	9.58	16.2	75.3	36.3
4		08-10-2019 to 09-10-2019	9.09	18.0	84.8	39.1
5		15-10-2019 to 16-10-2019	9.86	17.3	79.4	38.5
6		16-10-2019 to 17-10-2019	10.6	16.9	77.8	36.4
7		22-10-2019 to 23-10-2019	10.5	19.8	78.9	40.5
8		23-10-2019 to 24-10-2019	9.52	19.4	81.4	42.4
9		28-10-2019 to 29-10-2019	9.34	18.6	81.8	43.5
10		29-10-2019 to 30-10-2019	10.8	20.1	83.4	44.1

11	Nov--19	04-11-2019 to 05-11-2019	10.7	21.5	86.4	47.4
12		05-11-2019 to 06-11-2019	11.6	22.5	90.7	49.1
13		11-11-2019 to 12-11-2019	10.7	20.1	78.4	46.0
14		12-11-2019 to 13-11-2019	10.3	21.2	65.5	41.7
15		20-11-2019 to 21-11-2019	10.8	21.5	73.0	44.8
16		21-11-2019 to 22-11-2019	11.3	21.9	76.1	47.0
17		25-11-2019 to 26-11-2019	11.7	22.3	86.7	53.2
18		26-11-2019 to 27-11-2019	11.2	21.7	88.1	54.3
19	Dec--19	02-12-2019 to 03-12-2019	10.8	20.7	67.2	33.2
20		03-12-2019 to 04-12-2019	11.7	22.0	74.0	37.7
21		09-12-2019 to 10-12-2019	13.2	24.2	87.1	41.6
22		10-12-2019 to 11-12-2019	12.7	24.0	84.1	40.6
23		18-12-2019 to 19-12-2019	12.5	23.5	74.0	32.8

24		19-12-2019 to 20-12-2019	12.4	23.4	76.6	33.8
25		23-12-2019 to 24-12-2019	13.4	22.6	79.3	36.3
26		24-12-2019 to 25-12-2019	13.8	22.9	78.1	35.9
27	Jan-20	01-01-2020 to 02-01-2020	10.4	20.8	76.3	45.3
28		02-01-2020 to 03-01-2020	8.76	16.1	57.2	26.5
29		08-01-2020 to 09-01-2020	8.47	16.6	58.2	24.6
30		09-01-2020 to 10-01-2020	8.20	18.2	52.3	22.6
31		13-01-2020 to 14-01-2020	9.26	19.5	77.4	34.3
32		14-01-2020 to 15-01-2020	9.80	17.7	74.1	36.1
33		20-01-2020 to 21-01-2020	9.20	19.2	78.2	37.2
34		21-01-2020 to 22-01-2020	10.4	21.5	74.8	38.8
35		27-01-2020 to 28-01-2020	10.7	19.8	89.7	43.1
36		28-01-2020 to 29-01-2020	9.84	20.1	76.5	37.9

37	Feb-20	05-02-2020 to 06-02-2020	10.4	22.4	74.6	36.9
38		06-02-2020 to 07-02-2020	9.64	21.4	62.6	28.1
39		10-02-2020 to 11-02-2020	12.5	24.6	78.6	40.4
40		11-02-2020 to 12-02-2020	12.8	24.9	76.3	38.3
41		17-02-2020 to 18-02-2020	11.8	24.0	70.3	38.7
42		18-02-2020 to 19-02-2020	10.8	23.6	63.9	34.8
43		24-02-2020 to 25-02-2020	14.5	26.6	81.9	43.6
44		25-02-2020 to 26-02-2020	14.2	26.3	78.2	41.6
45	Mar-20	02-03-2020 to 03-03-2020	13.1	29.2	84.3	43.1
46		03-03-2020 to 04-03-2020	14.0	30.1	88.1	47.4
47		09-03-2020 to 10-03-2020	14.3	32.8	89.1	49.2
48		11-03-2020 to 12-03-2020	14.1	31.7	86.6	48.5
49		17-03-2020 to 18-03-2020	14.5	33.4	90.1	52.4

50		18-03-2020 to 19-03-2020	13.9	32.1	83.4	46.1
NAAQM Standard			**80 (24 Hrs)**	**80 (24 Hrs)**	**100 (24 Hrs)**	**60 (24 Hrs)**

• **All Concentrations are in microgram per cubic meter**

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

Sr. No.	Month	Date of Monitoring	SO_2	NO_X	PM_{10}	$PM_{2.5}$
			µg/m3	µg/m3	µg/m3	µg/m3
1	Oct--19	01-10-2019 to 02-10-2019	9.01	18.8	82.4	37.9
2		03-10-2019 to 04-10-2019	9.37	18.1	70.8	33.5
3		08-10-2019 to 09-10-2019	8.71	18.4	66.1	30.3
4		09-10-2019 to 10-10-2019	9.26	17.8	74.4	37.2
5		15-10-2019 to 16-10-2019	10.4	18.6	83.3	41.6
6		16-10-2019 to 17-10-2019	10.3	17.6	75.4	35.2
7		22-10-2019 to 23-10-2019	9.95	17.2	69.4	34.7
8		23-10-2019 to 24-10-2019	9.88	18.0	67.3	34.8
9		28-10-2019 to 29-10-2019	9.79	18.7	70.5	35.0

10		29-10-2019 to 30-10-2019	9.27	18.2	66.7	32.8
11	Nov--19	05-11-2019 to 06-11-2019	10.7	19.2	69.6	35.3
12		06-11-2019 to 07-11-2019	10.9	19.4	66.7	34.4
13		12-11-2019 to 13-11-2019	9.99	18.8	65.1	33.0
14		13-11-2019 to 14-11-2019	10.2	19.1	62.5	31.1
15		20-11-2019 to 21-11-2019	10.6	21.3	75.1	48.2
16		21-11-2019 to 22-11-2019	11.0	22.0	87.1	54.1
17		26-11-2019 to 27-11-2019	10.9	22.2	74.3	38.2
18		27-11-2019 to 28-11-2019	11.2	21.5	84.4	41.7
19	Dec--19	03-12-2019 to 04-12-2019	10.5	21.5	74.3	37.8
20		04-12-2019 to 05-12-2019	10.6	21.6	76.6	38.0
21		10-12-2019 to 11-12-2019	11.3	24.2	75.3	37.8
22		11-12-2019 to 12-12-2019	11.7	24.2	79.3	40.6

23		18-12-2019 to 19-12-2019	11.1	25.1	71.4	34.2
24		19-12-2019 to 20-12-2019	11.8	25.6	69.0	33.4
25		24-12-2019 to 25-12-2019	11.8	24.6	74.5	36.3
26		25-12-2019 to 26-12-2019	12.0	23.4	78.6	37.8
27	Jan-20	01-01-2020 to 02-01-2020	8.91	17.4	60.7	27.2
28		02-01-2020 to 03-01-2020	8.23	15.6	61.2	27.5
29		08-01-2020 to 09-01-2020	8.39	16.8	57.9	23.5
30		09-01-2020 to 10-01-2020	8.11	17.2	61.6	24.2
31		14-01-2020 to 15-01-2020	8.89	17.2	72.8	32.4
32		15-01-2020 to 16-01-2020	9.26	17.5	79.8	40.4
33		21-01-2020 to 22-01-2020	9.23	18.6	67.3	31.5
34		22-01-2020 to 23-01-2020	9.83	19.1	73.3	35.6
35		27-01-2020 to 28-01-2020	9.56	19.7	73.4	34.9

36		28-01-2020 to 29-01-2020	10.2	19.9	69.5	32.2
37	Feb-20	05-02-2020 to 06-02-2020	9.43	19.8	63.1	28.6
38		06-02-2020 to 07-02-2020	9.02	18.1	60.8	26.8
39		11-02-2020 to 12-02-2020	10.1	20.2	71.8	34.7
40		12-02-2020 to 13-02-2020	10.3	20.6	66.4	31.2
41		18-02-2020 to 19-02-2020	9.85	22.0	65.7	30.9
42		19-02-2020 to 20-02-2020	11.5	23.5	72.3	34.5
43		25-02-2020 to 26-02-2020	9.91	21.8	78.5	37.5
44		26-02-2020 to 27-02-2020	10.0	22.8	84.3	41.4
45	Mar-20	03-03-2020 to 04-03-2020	10.6	24.1	79.3	38.1
46		04-03-2020 to 05-03-2020	12.2	27.7	82.5	39.4
47		09-03-2020 to 10-03-2020	11.8	28.1	77.4	37.9
48		11-03-2020 to 12-03-2020	12.0	28.5	72.6	34.5

49	17-03-2020 to 18-03-2020	12.5	28.2	75.5	36.6
50	18-03-2020 to 19-03-2020	12.9	29.3	83.1	41.5
NAAQM Standard		**80 (24 Hrs)**	**80 (24 Hrs)**	**100 (24 Hrs)**	**60 (24 Hrs)**

- **All Concentrations are in microgram per cubic meter**

3.1 Location : STP (A-3)

Sr. No.	Month	Date of Monitoring	SO_2	NO_X	PM_{10}	$PM_{2.5}$
			µg/m³	µg/m³	µg/m³	µg/m³
1	Oct--19	03-10-2019 to 04-10-2019	9.61	16.1	60.5	27.9
2		04-10-2019 to 05-10-2019	9.34	17.7	62.4	28.3
3		09-10-2019 to 10-10-2019	8.55	17.3	61.1	27.1
4		10-10-2019 to 11-10-2019	9.00	18.9	63.7	29.0
5		17-10-2019 to 18-10-2019	9.56	20.4	70.7	33.3
6		18-10-2019 to 19-10-2019	10.9	18.2	73.1	33.0
7		24-10-2019 to 25-10-2019	11.3	19.3	80.5	41.4
8		25-10-2019 to 26-10-2019	11.2	18.8	85.6	47.3
9		29-10-2019 to 30-10-2019	9.49	19.3	69.8	31.0
10		30-10-2019 to 31-10-2019	9.51	18.5	67.2	30.8
11	Nov--19	06-11-2019 to 07-11-2019	10.3	20.5	65.3	30.5

12		07-11-2019 to 08-11-2019	9.60	19.5	64.1	31.5
13		13-11-2019 to 14-11-2019	9.53	19.7	65.1	31.5
14		14-11-2019 to 15-11-2019	10.0	20.0	71.3	33.9
15		18-11-2019 to 19-11-2019	11.1	21.4	89.2	55.5
16		19-11-2019 to 20-11-2019	11.7	22.1	93.7	57.3
17		27-11-2019 to 28-11-2019	10.8	21.6	73.6	37.6
18		28-11-2019 to 29-11-2019	11.4	22.7	78.5	39.8
19	Dec--19	04-12-2019 to 05-12-2019	11.3	21.5	72.7	31.0
20		05-12-2019 to 06-12-2019	11.1	20.8	75.2	34.3
21		11-12-2019 to 12-12-2019	11.5	22.6	77.9	35.8
22		12-12-2019 to 13-12-2019	11.7	22.6	81.8	37.1
23		16-12-2019 to 17-12-2019	12.0	23.3	84.7	39.3
24		17-12-2019 to 18-12-2019	12.1	24.3	85.7	40.8

25		25-12-2019 to 26-12-2019	12.8	24.6	73.1	35.5
26		26-12-2019 to 27-12-2019	13.2	25.6	70.0	33.4
27	Jan-20	02-01-2020 to 03-01-2020	8.69	15.6	62.7	28.6
28		03-01-2020 to 04-01-2020	9.09	18.2	58.8	26.5
29		06-01-2020 to 07-01-2020	8.81	17.7	64.2	25.2
30		07-01-2020 to 08-01-2020	8.26	17.6	68.8	28.0
31		15-01-2020 to 16-01-2020	9.24	17.9	71.4	41.7
32		16-01-2020 to 17-01-2020	9.92	17.1	68.3	39.1
33		22-01-2020 to 23-01-2020	9.61	19.2	66.3	39.9
34		23-01-2020 to 24-01-2020	10.4	18.8	70.6	41.3
35		29-01-2020 to 30-01-2020	9.79	19.6	65.3	32.9
36		30-01-2020 to 31-01-2020	9.22	18.9	61.2	30.4
37	Feb -20	03-02-2020 to 04-02-2020	8.71	18.1	57.7	25.1

38		04-02-2020 to 05-02-2020	8.21	19.4	64.1	25.4
39		12-02-2020 to 13-02-2020	9.09	21.8	64.9	25.5
40		13-02-2020 to 14-02-2020	9.56	20.7	68.2	27.9
41		19-02-2020 to 20-02-2020	11.3	22.3	84.1	39.8
42		20-02-2020 to 21-02-2020	11.2	23.6	73.2	38.7
43		26-02-2020 to 27-02-2020	9.91	20.9	71.9	36.9
44		27-02-2020 to 28-02-2020	10.2	20.5	65.7	34.8
45	Mar-20	04-03-2020 to 05-03-2020	10.8	24.2	64.4	31.7
46		05-03-2020 to 06-03-2020	11.1	24.6	66.2	32.7
47		12-03-2020 to 13-03-2020	11.8	25.1	61.1	29.8
48		13-03-2020 to 14-03-2020	12.0	25.8	58.8	27.2
49		16-03-2020 to 17-03-2020	11.6	26.0	62.7	32.8
50		17-03-2020 to 18-03-2020	11.7	24.9	65.2	33.4

NAAQM Standard	80 (24 Hrs)	80 (24 Hrs)	100 (24 Hrs)	60 (24 Hrs)

• **All Concentrations are in micro gram per cubic meter.**

Location : Guest House (A-4)

Sr. No.	Month	Date of Monitoring	SO_2	NO_X	PM_{10}	$PM_{2.5}$
			µg/m³	µg/m³	µg/m³	µg/m³
1	Oct--19	03-10-2019 to 04-10-2019	9.06	17.4	56.6	27.0
2		04-10-2019 to 05-10-2019	9.71	16.6	60.1	29.6
3		10-10-2019 to 11-10-2019	9.07	17.1	65.4	30.5
4		11-10-2019 to 12-10-2019	9.02	17.5	68.3	32.7
5		15-10-2019 to 16-10-2019	9.71	19.4	71.3	34.6
6		16-10-2019 to 17-10-2019	9.48	19.2	70.5	35.5
7		24-10-2019 to 25-10-2019	9.96	19.8	71.0	37.0
8		25-10-2019 to 26-10-2019	11.3	20.3	78.2	39.6
9		29-10-2019 to 30-10-2019	9.17	17.6	67.7	29.6

10		30-10-2019 to 31-10-2019	9.60	16.7	71.9	30.8
11	Nov--19	07-11-2019 to 08-11-2019	9.12	17.2	68.8	31.2
12		08-11-2019 to 09-11-2019	9.79	16.7	71.1	32.0
13		14-11-2019 to 15-11-2019	9.12	17.2	65.1	31.9
14		15-11-2019 to 16-11-2019	9.20	17.5	68.4	33.7
15		20-11-2019 to 21-11-2019	9.50	19.4	71.1	34.1
16		21-11-2019 to 22-11-2019	9.09	19.7	76.1	37.4
17		28-11-2019 to 29-11-2019	9.87	20.9	83.6	41.5
18		29-11-2019 to 30-11-2019	9.62	21.5	77.3	39.2
19	Dec--19	05-12-2019 to 06-12-2019	11.3	22.2	76.2	35.1
20		06-12-2019 to 07-12-2019	11.2	21.9	78.2	37.2
21		12-12-2019 to 13-12-2019	10.5	22.4	77.1	36.5
22		13-12-2019 to 14-12-2019	10.9	22.9	70.4	34.8

23		18-12-2019 to 19-12-2019	10.2	21.8	67.8	32.7
24		19-12-2019 to 20-12-2019	9.77	21.4	70.7	33.8
25		26-12-2019 to 27-12-2019	10.1	21.7	71.4	34.2
26		27-12-2019 to 28-12-2019	10.4	21.9	75.3	33.6
27	Jan-20	02-01-2020 to 03-01-2020	7.04	13.5	52.4	22.6
28		03-01-2020 to 04-01-2020	7.40	13.8	54.6	23.9
29		08-01-2020 to 09-01-2020	8.00	14.5	53.4	22.8
30		09-01-2020 to 10-01-2020	7.80	14.3	55.6	22.4
31		16-01-2020 to 17-01-2020	8.55	15.4	65.6	38.6
32		17-01-2020 to 18-01-2020	8.40	15.7	70.2	34.3
33		23-01-2020 to 24-01-2020	8.51	16.7	65.2	32.5
34		24-01-2020 to 25-01-2020	8.28	17.1	67.2	33.5
35		29-01-2020 to 30-01-2020	7.63	16.7	60.3	28.9

36		30-01-2020 to 31-01-2020	7.34	16.5	56.4	25.6
37	Feb - 20	05-02-2020 to 06-02-2020	9.17	19.2	65.7	34.8
38		06-02-2020 to 07-02-2020	10.7	20.4	70.3	39.4
39		13-02-2020 to 14-02-2020	9.51	20.3	69.5	37.8
40		14-02-2020 to 15-02-2020	9.80	20.3	63.2	35.2
41		20-02-2020 to 21-02-2020	9.48	21.2	59.1	29.6
42		21-02-2020 to 22-02-2020	10.1	21.6	58.9	30.3
43		27-02-2020 to 28-02-2020	10.5	21.2	76.8	38.9
44		28-02-2020 to 29-02-2020	10.8	23.3	64.9	33.4
45	Mar-19	05-03-2020 to 06-03-2020	11.4	24.1	72.5	38.1
46		06-03-2020 to 07-03-2020	10.1	23.6	60.3	28.5
47		12-03-2020 to 13-03-2020	10.4	23.2	62.7	30.4
48		13-03-2020 to 14-03-2020	10.8	23.0	58.1	27.3

49		17-03-2020 to 18-03-2020	11.2	23.5	63.2	32.5
50		18-03-2020 to 19-03-2020	11.5	23.8	68.3	35.1
NAAQM Standard			**80 (24 Hrs)**	**80 (24 Hrs)**	**100 (24 Hrs)**	**60 (24 Hrs)**

- **All Concentrations are in microgram per cubic meter**

ANNEXURE–1. (C)

Ambient Noise Quality Status

Oct-2019	Hourly Average Noise Level dB (A)									
Location	1st 05.10.19		2nd 12-10-2019		3rd 19-10-2019		4th 26-10-2019		5th 31-10-2019	
	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time
N-1 (Eklari Gate)	70.6	59.2	73.2	63.1	70.6	59.7	70.5	59.2	70.8	59.5
N-2 (Pump House-2) Near Water Reservoir	72.3	63.4	72.4	61.7	72.3	63.4	72.3	63.3	72.2	63.6
N-3 (STP)	52.6	49.0	53.0	46.3	52.6	49.2	52.5	48.7	52.5	48.8
N-4 (Guest House)	63.6	52.6	60.7	52.2	63.4	52.6	63.5	52.9	63.7	52.7
Norms	75	70	75	70	75	70	75	70	75	70

Nov-2019	Hourly Average Noise Level dB (A)							
Location	1st		2nd		3rd		4th	
	09.11.2019		16.11.2019		23.11.2019		30.11.2019	
	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time
N-1 (Eklari Gate)	70.6	59.5	70.6	59.3	70.5	59.7	71.4	59.1
N-2 (Pump House-2) Near Water Reservoir	74.0	63.4	72.3	63.4	73.8	63.5	71.7	62.7
N-3 (STP)	53.9	50.5	52.6	49.2	52.9	50.4	52.6	47.4
N-4 (Guest House)	63.7	52.9	63.4	52.6	63.8	52.8	64.3	53.3
Norms	75	70	75	70	75	70	75	70

Dec-2019	Hourly Average Noise Level dB (A)							
Location	1st		2nd		3rd		4th	
	07.12.2019		14.12.2019		21.12.2019		28.12.2019	
	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time
N-1 (Eklari Gate)	70.0	59.3	70.6	59.6	70.2	60.1	70.5	59.3
N-2 (Pump House-2) Near Water Reservoir	72.2	63.1	72.3	62.7	73.9	64.2	72.2	63.4
N-3 (STP)	52.6	49.0	53.0	49.1	53.3	49.2	52.6	48.9
N-4 (Guest House)	63.6	52.6	62.9	52.0	63.9	53.1	63.4	52.7
Norms	75	70	75	70	75	70	75	70

Jan-2020	Hourly Average Noise Level dB (A)									
Location	1st		2nd		3rd		4th		5th	
	04.01.2020		11.01.2020		18.01.2020		25.01.2020		31.01.2020	
	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time
N-1 (Eklari Gate)	69.6	63.1	70.8	59.2	70.6	59.5	70.5	59.3	70.2	58.6
N-2 (Pump House-2) Near Water Reservoir	72.4	61.7	72.2	63.4	72.3	62.7	72.3	63.4	73.9	63.9
N-3 (STP)	53.0	46.3	53.7	49.2	52.6	50.4	53.3	49.2	52.6	49.0
N-4 (Guest House)	60.7	52.2	63.4	52.2	63.8	52.8	63.9	53.2	64.3	53.3
Norms	75	70	75	70	75	70	75	70	75	70

Feb-2020	Hourly Average Noise Level dB (A)							
Location	1st		2nd		3rd		4th	
	08.02.2020		15.02.2020		22.02.2020		29.02.2020	
	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time
N-1 (Eklari Gate)	70.6	63.1	70.2	59.4	70.5	59.2	71.4	59.1
N-2 (Pump House-2) Near Water Reservoir	72.4	63.4	73.9	61.7	72.3	63.3	71.8	62.7
N-3 (STP)	53.7	46.3	52.6	49.0	52.5	48.8	52.6	47.4
N-4 (Guest House)	63.4	53.2	62.9	52.6	63.5	52.9	64.3	53.3
Norms	75	70	75	70	75	70	75	70

Mar -2020	Hourly Average Noise Level dB (A)					
Location	1st		2nd		3rd	
	07-03-2020		14-03.2020		19.03.2020	
	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time
N-1 (Eklari Gate)	73.1	62.9	72.5	62.8	73.3	63.1
N-2 (Pump House-2) Near Water Reservoir	72.4	63.2	72.3	62.8	72.1	63.4
N-3 (STP)	53.2	49.2	52.9	49.0	53.0	49.2
N-4 (Guest House)	63.3	52.3	63..1	52.0	63.4	52.5
Norms	75	70	75	70	75	70

ANNEXURE–1. (D)

FUGITIVE DUST EMISSION MONITORING STATUS

Sr. No.	LOCATION	Month	SPM (µg/m³)
1	Sinter Plant (Near Main Control Room Building)	Oct – 2019	908.5
		Nov – 2019	1483.10
		Dec – 2019	1154.8
		Jan – 2020	1408.2
		Feb – 2020	1028.5
		March – 2020	1083.6
2	Raw Material Handling Area (Near Transfer Point)	Oct – 2019	1205.0
		Nov – 2019	1071.8
		Dec – 2019	1231.9
		Jan – 2020	1561.2
		Feb – 2020	1345.4
		March – 2020	1621.8
3	DRP-2 (Near Coal Circuit Area)	Oct – 2019	--
		Nov – 2019	--
		Dec – 2019	1180.1
		Jan – 2020	1486.3
		Feb – 2020	1326.6
		March – 2020	1453.7
4	Raw Material Feed Area (Near Mixing Area)	Oct – 2019	1883.7
		Nov – 2019	1437.9
		Dec – 2019	1108.0
		Jan – 2020	1336.6

		Feb – 2020	1490.4
		March – 2020	1682.3
5	SMS (Near Ladle Heating Furnace)	Oct – 2019	850.8
		Nov – 2019	783.4
		Dec – 2019	696.0
		Jan – 2020	805.8
		Feb – 2020	708.2
		March – 2020	852.4
6	MBF (Near Mini Blast Furnace)	Oct – 2019	901.4
		Nov – 2019	834.2
		Dec – 2019	655.4
		Jan – 2020	874.5
		Feb – 2020	875.3
		March – 2020	972.5
7	MBF Stock Yard (Near Days Bins)	Oct – 2019	1788.7
		Nov – 2019	1055.6
Norms			**2000**

Annexure- 1.(E)

TREATED EFFLUENT QUALITY STATUS

1. Location : E-2 STP Outlet

Sr. No.	Test Parameter	Measurement Unit	Test Results						Limit as per Consent Conditions
			Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	
1.	Total Suspended Solids	mg/l	84.0	24.0	14.8	4.40	22.0	18.0	**100**
2.	Biochemical oxygen demand(BOD at 27^0C for 3 days)	mg/l	64.0	19.0	16.5	10.1	19.0	16.0	**100**

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

Sr. No.	Test Parameter	Measurement Unit							
			Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Limit as per Consent Conditions
1.	pH value	-	7.53	8.03	7.1	7.92	8.20	8.10	**5.5 to 9.0**
2.	Total Suspended Solids	mg/l	52.0	62.0	68.0	28.0	10.0	14.0	**100**
3.	Biochemical oxygen demand(BOD at 27^0C for 3 days)	mg / l	12.0	9.00	10.5	6.80	24.5	25.0	**100**
4.	Chemical oxygen demand (COD)	mg / l	208.0	185.5	240.0	188.0	168.0	177.0	**250**
5.	Oil & Grease	mg / l	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	**10**
6.	Total dissolved solids	mg/l	362.0	380.0	622.0	468.0	564.0	621.0	**2100**
7.	Chloride (as Cl)	mg / l	85.6	66.6	146.1	104.7	188.3	192.0	**600**
8.	Sulphate (as SO_4)	mg/l	57.1	31.6	36.8	29.8	38.5	39.0	**1000**
9.	Iron (as Fe)	mg/l	0.29	0.25	0.28	0.30	0.33	0.36	**5.0**

1.2 Location : E-1.3 (Coal Washery)

Sr. No.	Test Parameter	Measurement Unit	Test Results						Limit as per Consent Conditions
			Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	
1.	pH value	-	7.60	7.20	7.23	8.15	8.2	7.8	**5.5 to 9.0**
2.	Total Suspended Solids	mg/l	90.0	30.0	92.0	66.0	36.0	10.0	**100**
3.	Biochemical oxygen demand (BOD at 27^0C for 3 days)	mg /l	15.0	18.0	9.0	8.0	4.5	4.8	**100**
4.	Chemical oxygen demand (COD)	mg /l	240.0	221.7	165.9	146.9	81.6	93.9	**250**
5.	Oil & Grease	mg /l	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	**10**
6.	Total dissolved solids	mg/l	430.0	850.0	664.0	1260.0	492.0	834.0	**2100**
7.	Chloride (as Cl)	mg /l	85.6	178.5	160.3	278.2	93.4	218.9	**600**
8.	Sulphate (as SO_4)	mg/l	88.1	219.3	89.8	248.7	67.6	172.3	**1000**
9.	Iron (as Fe)	mg/l	0.31	0.22	0.24	0.29	0.16	0.18	**5.0**

1.3 Location : ETP Main Outlet (Utility)

Sr. No.	Test Parameter	Measurement Unit	Test Results						Limit as per Consent Conditions
			Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	
1.	pH value	-	7.97	6.90	8.42	7.6	7.9	7.7	**5.5 to 9.0**
2.	Total Suspended Solids	mg/l	10.0	8.00	10.8	5.2	6.0	8.0	**100**
3.	Biochemical oxygen demand (BOD at 27^0C for 3 days)	mg/l	8.0	5.00	5.0	6.3	5.5	4.5	**100**
4.	Chemical oxygen demand (COD)	mg/l	196.0	229.8	220.0	204.1	176.0	152.0	**250**
5.	Oil & Grease	mg/l	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	**10**
6.	Total dissolved solids	mg/l	346.0	470.0	538.0	560.0	340.0	358.0	**2100**
7.	Chloride (as Cl)	mg/l	85.6	102.3	151.8	114.2	41.8	44.9	**600**
8.	Sulphate (as SO_4)	mg/l	57.1	35.8	31.2	50.0	24.5	27.2	**1000**

9.	Iron (as Fe)	mg/l	0.24	0.18	0.22	0.24	0.18	0.16	**5.0**

1.4 Location : E-3- Pickling ETP Outlet

Sr. No.	Test Parameter	Measurement Unit	Test Results						Limit as per Consent Conditions
			Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	
1.	pH value	-	7.72	6.63	8.23	5.87	7.6	7.1	**5.5 to 9.0**
2.	Total Suspended Solids	mg/l	12.0	14.0	8.0	6.0	2.8	2.8	**100**
3.	Biochemical oxygen demand (BOD at 27^0C for 3 days)	mg/l	6.0	3.90	3.5	4.1	3.1	3.0	**100**
4.	Chemical oxygen demand (COD)	mg/l	216.0	237.9	240.0	236.7	168.0	156.0	**250**
5.	Oil & Grease	mg/l	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	**10**
6.	Total dissolved solids	mg/l	388.0	364.0	516.0	464.0	480.0	942.0	**2100**
7.	Chloride (as Cl)	mg/l	90.4	90.4	177.5	157.1	140.4	286.0	**600**
8.	Sulphate (as SO_4)	mg/l	23.3	32.9	30.7	47.9	39.8	52.0	**1000**
9.	Iron (as Fe)	mg/l	0.38	0.29	0.35	0.38	0.35	0.37	**5.0**

1.5 Location : E-1 (DRP Drain Effluent)

Sr. No.	Test Parameter	Measurement Unit	Test Results						Limit as per Consent Conditions
			Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	
1.	pH value	-	7.35	7.60	7.95	8.28	8.4	8.2	**5.5 to 9.0**
2.	Total Suspended Solids	mg/l	48.0	32.0	12.0	16.4	42.0	32.0	**100**
3.	Biochemical oxygen demand (BOD at 27^0C for 3 days)	mg/l	17.0	12.5	7.5	8.0	6.13	6.80	**100**
4.	Chemical oxygen demand (COD)	mg/l	132	217.7	137.6	142.8	102.0	106.1	**250**
5.	Oil & Grease	mg/l	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	**10**
6.	Total dissolved solids	mg/l	754.0	428.0	374.0	1206.0	1204.0	1002.0	**2100**

7.	Chloride (as Cl)	mg/l	190.4	56.2	35.8	160.3	158.8	98.1	**600**
8.	Sulphate (as SO_4)	mg/l	199.8	41.6	28.3	252.8	256.2	247.2	**1000**
9.	Iron (as Fe)	mg/l	0.41	0.26	0.20	0.36	0.32	0.35	**5.0**

1.6 Location : MBF ETP Outlet

Sr. No.	Test Parameter	Measurement Unit	Test Results						Limit as per Consent Conditions
			Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	
1.	pH value	-	7.55	7.82	7.30	7.80	7.8	7.9	**5.5 to 9.0**
2.	Total dissolved solids	mg/l	74.0	94.0	74.0	68.0	74.0	69.0	**2100**
3.	Total Suspended Solids	mg/l	8.0	22.5	16.0	17.1	20.5	19.0	**100**
4.	Biochemical oxygen demand (BOD at 27^0C for 3 days)	mg/l	228.0	241.9	152.0	176.0	192.0	186.0	**100**
5.	Chemical oxygen demand (COD)	mg/l	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	**250**
6.	Oil & Grease	mg/l	1812.0	1664.0	1712.0	1294.0	1896.0	1857.0	**10**
7.	Chloride (as Cl)	mg/l	542.6	323.7	363.0	304.6	402.8	387.0	**600**
8.	Sulphate (as SO_4)	mg/l	293.2	259.6	269.3	170.1	271.8	266.0	**1000**
9.	Iron (as Fe)	mg/l	0.58	0.39	0.34	0.32	0.40	0.38	**5.0**

Details of CSR Expenditure for the year 2018-19 and for the all 04 Quarters of 2019-20

Particulars	2018-19	During Quarter ended 30th June,2019	During Quarter ended 30th Sep. 2019	During Quarter ended 31st Dec, 2019	During Quarter ended 31st Mar, 2020	Total
Health care	469752	409739	1064453	0	2459378	3933570
Education, Training and Skill Development	2954059	1304352	319124	563770	1025023	3212269
Rural Development – Drinking Water and Sanitation	1584344	1687852	722982	371700	770273	3552807
Rural Development – Roads	2147700	16848	299940	266199	279042	862029
Environment	644462	190696	1307257	60400	151163	1709516
Swatch Bharat, Promotion of Sports and Cultural activities	879024	420162	24360	931125	282098	1657745
	8679341	4029649	3738116	2193194	4966977	14927936