Prakash Industries Limited

(AN ISO 9001 , 14001 AND OHSAS 18001 Certified Company)
Champa-495671 Distt. - Janjgir-Champa (Chhattisgarh)
CIN: L27109HR1980PLC010724
Phone: 07819-245103, 245108, 245378
Fax: 07819-283594 Web. – www.prakash.com

PIL/EHS/ENV-STATEMENT/2022/441 **Date : 03.05.2022**

The Member Secretary,
Chhattisgarh Environment Conservation Board,
Paryavas Bhawan, North Block, Sector – 19,
Nava Raipur, Atal Nagar,
Raipur (C.G.) 492002

Sub.: Environment Statement for Sponge Iron Division, Power Plant Division, Induction Furnace Division, Sinter Plant and Oxygen Plant for 2021 – 2022.

Sir,

Please find enclosed herewith Environment Statement as per Rule 14 of the Environment (Protection) Rules, 1986 of **Sponge Iron Division, Power Plant Division, Induction Furnace Division, Sinter Plant and Oxygen Plant** for the financial year **2021 – 2022, ended on 31.03.2022.**

We hope you will find the same in order.

Yours faithfully,
FOR PRAKASH INDUSTRIES LTD.,

03/05/2022

Santosh Thawait
Sr. Manager – EHS

Encl.: As above.

CC TO :

Principle Chief Conservator of Forest, Ministry of Environment, Forests and Climate Change (MoEF&CC), (Govt. of India), Regional Office, Aranya Bhawan, North Block, Sector-19, Nava Raipur, Atal Nagar, Raipur (C.G.) 492002	**The Regional Officer, Chhattisgarh Environment Conservation Board, Near Dindayal Upadhyay Park, Vyapar Vihar, Bilaspur (C.G.) 495001**

ENVIRONMENT STATEMENT FOR SPONGE IRON, POWER PLANT INDUCTION FURNACE DIVISION, SINTER PLANT AND OXYGEN PLANT

(YEAR 2021 – 2022)
PERIOD ENDED 31.03.2022

By

PRAKASH INDUSTRIES LIMITED
CHAMPA

FORM - V
(SEE RULE-14)

ENVIRONMENTAL STATEMENT FOR THE FINANCIAL YEAR ENDING 31ST MARCH 2022

PART-A

(i) **Name and address of the owner/ Occupier of the Industry, Operation or process** : **Sh. M. L. Pareek**
Director,
Prakash Industries Ltd.,
Village : Hathneora,
Tehsil : Champa - 495671
Dist.: Janjgir-Champa (CG)

(ii) **Production Capacity**

Units	
Sponge	: 12.00 LTPA,
Power	: {(WHRB–75 MW) + (CPP–162.5 MW)}
Steel	: 12.50 LTPA
Sinter	: 1.0 LTPA
Oxygen	: 8 TPD

(iii) **Year of Establishment**

Sponge	: Kiln I – 1993, Kiln II – 1996, Kiln III – 2009, Kiln IV – 2012, Kiln V – 2017, Kiln VI – 2019
Power	: 1999, 2005, 2011, 2012, 2017
Steel	: 1993, 2008, 2009, 2010, 2013, 2014, 2019, 2020
Sinter	: 2020
Oxygen	: 2020

(iv) **Date of last Environmental Statement Submitted** : 30.04.2021

PART – B

WATER AND RAW MATERIAL CONSUMPTION

(1) WATER CONSUMPTION (m^3/day)
Process (Boiler) = 1307.42
Cooling (SID+CPP+IFD+SINTER) = 21593.29
Domestic = 196.84

NAME OF THE PRODUCTS	Process Water Consumption Per Unit of Product Output	
	During the previous Financial year 2020 – 2021 (1)	During the current Financial year 2021 – 2022 (2)
Sponge Iron, Power generation (CPP + WHRB), Steel Ingots/Billets/Bloom, Sinter and Oxygen	Water is not consumed in the process. Water is mainly used for making DM water for Boiler use and for cooling purposes.	

(2) RAW MATERIAL CONSUMPTION

Name of Raw Material	Name of Products	Consumption of Raw Material per unit of output (Ton/Ton & Ton/MW) During the previous Financial year	During the current Financial year
SPONGE IRON PRODUCTION			
1. Iron Ore	Sponge Iron	1.531	1.533
2. Coal		0.989	1.086
3. Dolomite		0.157	0.122
POWER GENERATION			
1. ROM Coal/ Coal Fines	Power Generation	0.928	0.960
2. Coal char		0.176	0.217
STEEL (BLOOM/BILLET) PRODUCTION			
1. Sponge Iron+Slag Rec.	Steel	1.008	1.019
2. Ferro alloys & Aluminum Notch Bar		0.015	0.015
3. MS Scrap		0.100	0.086
4. Coke		0.007	0.007
5. Pig Iron/Mould Scrap/Hi Fe Si Mn		0.125	0.153
SINTER PRODUCTION			
1. Iron Ore Fines	Sinter	1.094	1.100
2. Coke Fines		0.048	0.053
OXYGEN PRODUCTION		Production	Production
1. Natural Gas	Oxygen	6.91TPD	6.98TPD

PART – C
Pollution discharged to environment/unit of output.
(Parameter As Specified In The Consent Issue)

Pollutants	Quantity of pollutants discharged (mass /day)	Concentrations of pollutants in discharges (mass/volume)	Percentage of variation from prescribed standard with reasons
(a) Water	We are not discharging any water to outside of the plant premises.		
(b) Air	Air pollutant discharged are within the range of prescribed standards. Average results of concentration of pollutants attached as **Annexure-I**		Not Applicable

PART - D
HAZARDOUS WASTE

As Specified Under [Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2016]

Hazardous Waste	Total Quantity (Kg)	
Used / Spent Oil*	During the previous financial year	During the current financial year
(a) From process	13090 Kg from all divisions of the plant	18140 Kg from all divisions of the plant
(b) From pollution control facilities	Nil	Nil

* We have disposed of 18140 kg of used oil to the CPCB authorized recyclers.

* Used Ion exchange material (waste resin) is yet to be generated from DM plant in the financial year 2021 – 2022, when it will be generated then we will disposed off to CPCB authorized recyclers.

PART - E
SOLID WASTES

Solid Waste	TOTAL QUANTITY	
	During the Previous Financial year	During the Current Financial year
(a) From Process		
SID – Kiln Waste	248597 MT	251675 MT
Power Plant	Nil	Nil
IFD – Slag	289942 MT	274285 MT
Sinter Plant	Nil	Nil
(b) From Pollution Control Facilities		

SID – ESP and Bag Filter Dust	151767 MT	131416 MT
Power Plant – Fly Ash	600917 MT (total quantity generated)	708097 MT (total quantity generated)
IFD – Venture Scrubber and Bag Filter Dust	5706 MT	5318 MT
Sinter– Venture Scrubber Dust	255 MT	24 MT
(c) 1.Quantity recycled or reutilized in the plant		
SID	Nil	Nil
POWER PLANT	148407 MT	184815 MT
IFD	31018 MT Metallic part recovered and reused in the furnace.	31064 MT Metallic part recovered and reused in the furnace.
SINTER PLANT	Nil	Nil
2. Sold		
SID	Nil	Nil
POWER PLANT	Nil	Nil
IFD	Nil	Nil
SINTER PLANT	Nil	Nil
3. Disposed		
SID	251957 of ESP dust & solid wastes are disposed off in abandoned mines.	198276 MT of ESP dust & solid wastes are disposed off in abandoned mines.
POWER PLANT	457844 MT fly ash used for brick/block manufacturing, 25822 MT fly ash supply to cement plant and 117251 MT fly ash was disposed off in permitted abandoned mines.	346187 MT fly ash used for brick/block manufacturing, 78417 MT fly ash used in filling of low lying area and 283493 MT fly ash was disposed off in permitted abandoned mines.
IFD	258924 MT slag was used in road construction and 5706 MT dust was used in road construction & filling of low lying areas.	243221 MT slag was used in road construction and 5318 MT dust was used in road construction & filling of low lying areas.
SINTER PLANT	255 MT dust was used in road construction and filling of low lying areas.	24 MT dust was used in road construction and filling of low lying areas.

PART – F

Please specify the characterizations (in term of composition of quantum) of hazardous as well as solid wastes and indicate disposal practice adopted for both of these categories of wastes.

As per analysis report based on schedule – 5 of HWM rules 2016, used oil (Hazardous waste) is suitable for Re-refining. At present, we collect used oil in the drums and keep it inside the shed and sale to CPCB approved authorized Re-cycler.

Solid waste (Coal char) generated from the process is presently used for captive power generation in FBB type power plant. Other solid waste is dumped in dumping yard with safe and scientific manner inside the plant premises, which is disposed off in abandoned mines after getting approval from the competent authority.

PART – G

Impact of the pollution abatement measures taken on conservation of natural resources and on the cost of production.

We are recycling and re-utilizing all wastewater generated from the plant. By recycling and re-utilizing, we conserve fresh water. We are using coal char (solid waste from kiln) as a fuel in Captive Power Plant based on FBB and minimize the use of Coal (natural fossil fuel). There is not much impact on cost of production by taking pollution control measures.

PART – H

Additional measures / investment proposal for environmental protection including abatement of Pollution, Prevention of pollution.

We have placed on road cleaning machine for better house keeping of the plant. We have made all roads pucca to minimize dust emission during vehicular movements. Time to time, we have made retrofitting work of ESPs, Bag filters, Venture scrubber systems & Fume scrubber systems to improve the efficiency of air pollution control devices and to minimize the pollution load in an environment. We have regular programme for plantation and this year we have planned to plant 10000 saplings in and around the plant premises. We are implementing effluent treatment plant and reuse of treated wastewater for cooling tower make up water purpose. This has been saving the consumption of fresh water. We have installed sewage treatment plant for treatment of domestic water and are using treated water for plantation purpose.

(i) WASTE HEAT RECOVERY BOILER (WHRB):

WHRB is a well known technology for the generation of power from the waste heat, generated by a source. Here, we use waste heat from rotary kiln where coal is used for the generation of heat for the purpose of melting of raw materials used for sponge production. Instead of leaving the huge quantity of heat in atmosphere which could unbalanced its stability; we use it for 75 MW power generation. The generated power from the process is used for Industrial use. By this process, we are preventing the nature and on the other hand we are re-cycling & re-using our resources.

(ii) UTILIZATION OF COAL CHAR:

In the process of sponge iron production, coal is used as a raw material for generating heat. At the end of the process, along with sponge iron, a huge quantity of coal char is generated. This coal char is wastage after the process which we are using char for the generation of power in captive power plant.

Utilizing the char in power generation, we are saving our surroundings with cleaner nature & atmosphere.

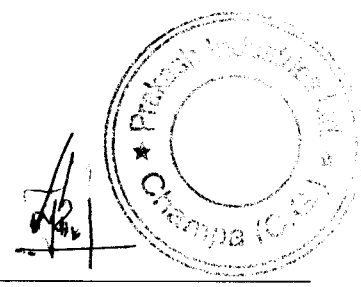
(iii) SLAG CRUSHER:

Slag generates during the process of steel making in Induction Furnace which contain Iron particles mixed with slag. To recover the iron particles, magnetic slag crusher has been established. The recovery of Iron particles is approximately 10% which is reused in the process of Induction furnace for steel making. By this, proportionate amount of raw material (i.e., mineral) is saved. By doing this, we are using a waste as a source & controlling environmental pollution.

PART – I

Any other particulars for improving the quality of the environment.

We are concern to protect the total environment of the plant as well as environment of the nearby area. We are working sincerely to achieve the **Sustainable Development**.



Annexure- I

Results of Concentrations of Pollutants

All wastewater generated from the plant is collected in the Effluent Treatment Plant and recycled and reused in the plant for dust suppression and plantation purpose. We are regularly monitoring the quality of water at outlet of ETP mentioned as below:

pH	:	7.47 – 7.92
BOD 3 days 27 ° C.	:	5.00 – 9.00 mg/lit.
COD	:	25.00 – 40.00 mg/lit.
S.S.	:	3.12 – 9.25 mg/lit.
O&G	:	0.40 – 0.70 mg/lit.

All wastewater generated from the colony is treated in Sewage Treatment Plant and reused for plantation purpose. We are regularly monitoring the quality of water at outlet of STP mentioned as below:

pH	:	7.59 – 8.05
BOD 3 days 27 ° C.	:	8.00 – 9.50 mg/lit.
COD	:	35.00 – 50.00 mg/lit.
S.S.	:	7.67 – 9.87 mg/lit.
O&G	:	0.60 – 0.70 mg/lit.

Ambient air quality and Stack monitoring is being done on regular basis and observed results (average) are given as below:

Ambient Air Quality

PM_{10}	:	18.56 – 62.83 µg/m^3
$PM_{2.5}$	:	8.25 – 41.62 µg/ m^3
SO_2	:	9.56 – 27.14 µg/ m^3
NOx	:	19.57 – 42.64 µg/ m^3
CO	:	0.0009 – 0.0035 µg/ m^3

Stack Monitoring Results:

PM	:	18.61 – 41.65 mg/ Nm^3

Prakash Industries Limited

(AN ISO 9001 , 14001 AND OHSAS 18001 Certified Company)
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PIL/EHS/ENV-STATEMENT/2022/442 **Date : 03.05.2022**

The Member Secretary,
Chhattisgarh Environment Conservation Board,
Paryavas Bhawan, North Block, Sector – 19,
Nava Raipur, Atal Nagar,
Raipur (C.G.) 492002

Sub.: Environment Statement for Submerged Arc Furnace (SAF) Division for 2021 – 2022.

Sir,

Please find enclosed herewith Environment Statement as per Rule 14 of the Environment (Protection) Rules, 1986 of **Submerged Arc Furnace (SAF) Division** for the financial year **2021 – 2022, ended on 31.03.2022.**

We hope you will find the same in order.

Yours faithfully,
FOR PRAKASH INDUSTRIES LTD.,

03/05/2022

Santosh Thawait
Sr. Manager – EHS

Encl.: As above.

CC TO :

Principle Chief Conservator of Forest, Ministry of Environment, Forests and Climate Change (MoEF&CC), (Govt. of India), Regional Office, Aranya Bhawan, North Block, Sector-19, Nava Raipur, Atal Nagar, Raipur (C.G.) 492002	**The Regional Officer, Chhattisgarh Environment Conservation Board, Near Dindayal Upadhyay Park, Vyapar Vihar, Bilaspur (C.G.) 495001**

ENVIRONMENT STATEMENT FOR SUBMERGED ARC FURNACES (SAF) DIVISION

(YEAR 2021 – 2022)
PERIOD ENDED 31.03.2022

By
PRAKASH INDUSTRIES LIMITED
CHAMPA

FORM - V
(SEE RULE-14)

ENVIRONMENTAL STATEMENT FOR THE FINANCIAL YEAR ENDING 31ST MARCH 2022

PART-A

(I)	**Name and address of the owner/ Occupier of the Industry, Operation or process**		:	**Sh. M. L. Pareek Director, Prakash Industries Ltd., Village : Hathneora Tehsil : Champa - 495671 Dist.: Janjgir-Champa (C.G.)**
(II)	**Production Capacity**	**Units**	:	7500 KVA x 9 Nos (Capacity – 1,15,000 TPA)
(III)	**Year of Establishment**		:	2004, 2005, 2008, 2013, 2015 and 2017
(IV)	**Date of the Environmental Statement Submitted**		:	30.04.2021

PART - B

WATER AND RAW MATERIAL CONSUMPTION

(1) WATER CONSUMPTION (m^3/day)

Process (Boiler)	=	Nil
Cooling	=	959.64
Domestic	=	10.15

NAME OF THE PRODUCTS	**Process Water Consumption Per Unit of Product Output**	
	During the previous Financial year 2020 – 2021 (1)	During the current Financial year 2021 – 2022 (2)
Ferro alloys	Water is not consumed in the process. Water is mainly used for Cooling Water purpose.	

(2) RAW MATERIAL CONSUMPTION

Name of Raw Material	Name of Products	Consumption of Raw Material per unit of output. (Ton/Ton)	
		During the previous Financial year	During the current Financial year
1. Manganese Ore	Si-Mn, Hi Fe-Si Mn	Nil	Nil
2. Coal		0.567	0.927
3. Coke		0.130	0.002
4. Dolomite		0.152	0.187
5. Quartz		0.030	0.013
6. Ele. Carbon Paste		0.010	0.011
7. Iron Ore Fines		0.735	1.206
8. Mill Scale		0.382	0.570
9. Kiln Accretion		0.083	0.048
10. Sinter		0.492	0.075
11. Lime Stone		0.151	0.184
12. Flour Spar		0.037	0.043

PART – C

Pollution discharged to environment /unit of output.
(Parameter As Specified In the Consent Issue)

Pollutants	Quality of Pollutants Discharged (mass /day)	Concentrations of Pollutants discharges (mass/volume)	Percentage of variation from prescribed standard with reasons
(a) Water	We are not discharging any water to outside the plant premises.		
(b) Air	Air pollutant discharged are within the range of prescribed standards. Average results of concentration of pollutants attached as **Annexure-I**		Not Applicable

PART - D
HAZARDOUS WASTE

As Specified Under [Hazardous Wastes (Management, Handling and Transboudary Movement) Rules, 2016]

Hazardous Waste	Total Quantity (Kg)	
Used / Spent Oil*	During the previous financial year	During the current financial year
(a) From process	13090 Kg from all divisions of the plant	18140 Kg from all divisions of the plant
(b) From pollution control facilities	Nil	Nil

* We have disposed of 18140 kg of used oil to the CPCB authorized recyclers.

PART - E
SOLID WASTES

Solid Waste	TOTAL QUANTITY	
	During the Previous Financial year	During the Current Financial year
(a) From Process –Slag	50186 MT	70186 MT
(b) From Pollution Control Facilities - Bag Filter dust	6030 MT	6803 MT
(c) 1.Quantity recycled or reutilized within the unit	Nil	Nil
2. Sold	Nil	Nil
3. Disposed	50186 MT slag was used in road construction & filling of low lying areas and 6030 MT bag filter dust was disposed off in permitted abandoned mines.	70186 MT slag was used in road construction & filling of low lying areas and 6803 MT bag filter dust was disposed off in permitted abandoned mines.

PART - F

Please specify the characterizations (in term of composition of quantum) of hazardous as well as solid wastes and indicate disposal practice adopted for both of these categories of wastes.

As per analysis report based on schedule – 5 of HWM rules 2016, used oil (Hazardous waste) is suitable for Re-refining. At present, we collect used oil in the drums and keep it inside the shed and sale to CPCB approved authorized Re-cycler.

PART - G

Impact of the pollution abatement measures taken on conservation of natural resources and on the cost of production.

We are recycling and re-utilizing all wastewater generated from the plant. By recycling and re-utilizing, we conserve fresh water. We are using Sinter as Raw material in the furnace. There is not much impact on cost of production by pollution control measures.

PART - H

Additional measures / investment proposal for environmental protection including abatement of Pollution, Prevention of pollution.

We have provided Bag filter system for control of source emission and Fogging system for fugitive emission which are working more efficient. We have made all roads pucca to minimize dust emission during vehicular movements. Time to time, we have made retrofitting of pollution control equipments for better working purpose. We have regular programme for plantation and this year we have planned to plant 10000 saplings in and around the plant premises. We are implementing waste water treatment and reuse of treated wastewater for cooling tower make up water purpose. This will save the consumption of fresh water. We have installed sewage treatment plant for treatment of domestic water and are using treated water for plantation purpose.

PART - I

Any other particulars for improving the quality of the environment.

We are concern to protect the total environment of the plant as well as environment of the nearby area. We are working sincerely to achieve the **Sustainable Development**.

Prakash Industries Ltd.

Annexure- I

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COD	:	35.00 – 50.00 mg/lit.
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SO_2	:	9.56 – 27.14 µg/ m^3
NOx	:	19.57 – 42.64 µg/ m^3
CO	:	0.0009 – 0.0035 µg/ m^3

Stack Monitoring Results:

PM	:	25.83 – 40.51 mg/ Nm^3

Prakash Industries Ltd. Champa (C.G.)