ENVIRONMENTAL STATEMENT

FOR THE FINANCIAL YEAR

2020-2021

SHREE BASAVESHWAR SUGARS LIMITED

PREPARED BY

SHREE BASAVESHWAR SUGARS LIMITED

NH-218, Karjol-Village, Tq.-Dist. Vijayapura,

Karnataka – 586 108. India,

Environmental Audit- An Overview

Like financial auditing this is conducted every year to have an accountability of the financial inflows and outflows, profit etc. Environmental auditing is a concept, which would give the accountability of the issues related to the Environment. This would help in comparing the data gathered regarding raw material consumption, water consumption etc and would help in reducing the same to the best possible extent.

Environmental audit is an exercise of self-assessment to minimize the generation of wastes and pollution potential.

Environmental audit is a technique being introduced for integrating the interest of the industry and the environment, so that these could be mutually supportive. This technique is basically a part of industries internal procedures in meeting their responsibilities towards a better environment. Also the policy statement for abatement of pollution by the Government of India provides for submission of Environment Audit Report by all concerned industries, which would subsequently evolve into an environmental audit.

FIGURE: GREEN BELT DEVELOPMENT PICS

Objectives

The Environmental Audit helps in pollution control, improved production, safety and health and conservation of natural resources and hence its overall objectives can be stated as achievement of sustainable development.

The Objectives of an Environmental Audit in an Industry are:

To determine the mass balance of various materials used and the performance of various process equipment so as to identify usage of materials in excess than required.

To review the conversion efficiency of process equipment and accordingly fix up norms for equipment/operation performance and minimization of wastes.

- To identify the areas of water usage and wastewater generation and to determine the characteristics of wastewater.
- To determine the solid wastes and Hazardous wastes generated, their sources, quantities and characteristics.
- To determine the possibility of wastes minimization, recovery and re-cycling of wastes.
- To identify the possibility of waste minimization, recovery and re cycling of wastes.
- To determine the performance of the existing waste treatment/control system so as to modify or install additional or alternative control equipment accordingly.

FORM- V

ENVIRONMENTAL STATEMENT FOR THE FINANCIAL

YEAR ENDING 31ST MARCH 2021

PART- A

1	Name and Address of the owner occupier of the industry in operation or process	The Managing Director SHREE BASAVESHWAR SUGARS LIMITED NH-218, Karjol-Village, Tq.-Dist. Vijayapura, Karnataka – 586 108. India,
2	Industrial Category	Large – Red
3	Production Capacity	❖ 3500 TCD Sugar ❖ 26 MW Co-Gen Plant
4	Year Of Commencement	December 2014
5	Date of Last Environmental Statement Submitted	---
6	No. of Employees	250

PART-B

Water and Raw Material Consumption

I) a. Water Consumption in m^3/day

Source	Water Consumption in m^3/d	
	During the Previous Financial Year 2019-2020	During the Current Financial Year 2021-2021
a) Boiler Feed	178	208
b) Cooling	438	870
c) Domestic	05	18
d) Process		117
d) Others	02	15

b. Water consumption per unit of output

Name of the Products	Water consumption per unit of product (m^3/MT of product)	
	During the Previous Financial Year 2019-2020	During the Current Financial Year 2020-2021
Sugar	1.30	1.95

- Note: The water consumption per unit of product is calculated based on daily average sugar produced. (Please see Annexure – I for the details of the seasonal working of the sugar factory). The average water consumption reduced considerably due to higher output of sugar and better manufacturing discipline.
- The industry is achieved the CREP guidelines of 100 liters of per MT of cane crushed by recycling the excess condensate available from cane during the crushing season.

II) Raw Material Consumption

Sl. No	Name of Raw Material	Name of Products	Consumption of Raw material per unit output (MT/MT)	
			During the Previous Financial Year 2019-2020	During the Current Financial Year 2020-2021
1	Sugar Cane	Sugar	9.40	9.14
2	Caustic Soda		0.001	0.0008
3	Lime		0.0142	0.0151
4	Sulphur		0.006	0.005

PART-C

Pollution Generated (Parameters as specified in the consent issued

Pollutants	Quantity of Pollutants discharged per mass/ day(Kg/day)	Concentration of Pollutants discharged mass/ volume (mg/Nm^3)	Percentage of variations from prescribed standards with reasons
1. Water	▪ The water will be used for domestic, process, coolingand for boiler feeding. ▪ The waste water generated from the process and from the washings is treated in ETP. ▪ Monitoring of characteristics of effluent treated & untreated will be outsourced to KSPCB empanelled laboratories. Analysis of ETP treated & untreated monitoring is attached.		

2. Air
▪ The sources of air pollution from this unit are 130 TPH Boiler and 1010 KVA DG Set – 2 No's. ▪ The unit has provided air pollution control measures (APCM) in the form of ESP and provided stack of adequate height of 82 m ARL for 130 TPH Boiler. ▪ The unit has provided stack of adequate height of 15 m AGL for the DG set of 1010 KVA – 2 No's with acoustic enclosure as per the KSPCB guidelines. ▪ Pollutants Emission within the KSPCB norms is achieved through providing Effective Stack Heights along with State of the heart APC equipment's to all the air pollution sources. Hence the ambient air quality is maintained as per the KSPCB standards. ▪ Note: Analysis report of Ambient & Stack monitoring is attached.

PART-D

Hazardous Waste

(As specified under the Hazardous Waste/ Management and Handling Rules, 2016)

Hazardous Waste	Total Quantity (KL/A)	
	During the Previous Financial Year 2019-2020	During the Current Financial Year 2020-2021
a) From Process	Nil	NIL
b) From pollution control facilities		
Used Oil from DG set	NIL	NIL
Oil Soaked Cotton Waste	0.05 MT/Annum	0.04 MT/Annum

PART-E

Solid Wastes

Particulars	Total Quantity (MT/Season)	
	During the Previous Financial Year 2019-2020	During the Current Financial Year 2020-2021
I) From Process (by Product)		
i) Bagasse	148601.577	169840.896
ii) Press mud	5017.500MT (After Evaporation)	6008.400 MT (After Evaporation)
iii) Molasses	24031.000MT	26495.000MT
iv) Boiler ash	3759.680MT	4141.07MT
II) From Pollution Control facility		
i) ETP Sludge	Used as Manure	Used as Manure
III) Quantity recycled or reutilized within the unit		
i) Bagasse as boiler fuel	139836.000	158661.740 (6043.376 used for oliver as bagasse cilo)
ii) ETP Sludge	NIL	NIL
Sold		
i) Bagasse	Nil	Nil
ii) Press mud	3291.810 (sold to farmers) 1725.690(used for own land)	184.210
iii) Molasses	19042.760	26495
iv) Boiler ash	3759.680	4141.07

PART-F

Please specify the characterization (in terms of Composition and quantum) of Hazardous as well as Solid wastes indicate disposal adopted for both these categories of wastes.

Hazardous Waste

- The generated hazardous waste is collected manually and used in house. Generation of hazardous waste is from DG set and is in the form of used oil. The quantity generated during the current financial year is 0.1KL/Annum.
- This was stored securely in sealed, labeled barrels in the industrial premises and used for lubrication of machineries, stackers, doors etc. .

Solid Waste

- Major by products (solid wastes) from the unit are Press mud, Bagasse, Boiler ash &Molasses.
- All the molasses produced is sold to the distilleries as a raw material for manufacturing rectified spirit and potable alcohol.
- Other by-products viz. Press mud, boiler ash are mixed with ETP sludge. This mixture is rich in nutrients and contains Nitrogen, Phosphorous and Potassium and can be used as organic fertilizer. This mixture is given to the farmers at subsidized rates. Because of its rich nutrient value, manure acts as a soil conditioner and helps in a better yield of sugar cane.
- Bagasse is used as boiler fuel. Refer Annexure II, III and IV for the characteristics of bagasse, press mud and molasses respectively.

PART-G

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

I) Effective dispersion of stack emissions:

The company has installed chimneys of adequate heights and air pollution control measures as per the pollution control board guidelines for all the air pollution sources from the unit.

Electro static Precipitator provided for boiler is ensuring the ambient air quality in and around the factor premises by removing the SPM from the flue gas. All these measures have resulted in maintain the ambient air quality in the industrial premises.

II) Recycling of Solid Waste:

All the solid waste produced during the manufacturing process is recycled back within the unit thereby keeping with the principal that “Waste is a misplaced resource”.

III) Conservation of Raw Material:

The company has made elaborate arrangements for fool proof system to avoid rejections. Control plans are implemented to ensure quality control at every stage. All these constant action plans ensure that non-conformity is not carried to the next stage. This means less scrap and hence lesser raw material consumption per unit of product.

IV) Reduced Water Consumption:

Recirculation of water (i.e. water from sulphur house, air compressor, vacuum filter, boiler blow down cooling tower blow down) has resulted in reduced water consumption. Prevention of leakages adoption of dry scrapping techniques and avoiding flushing of spillage has resulted in reduced water consumption. The industry is recycling the excess available condensate is cooled in cooling tower and reused.

PART-H

Additional measures/investment proposal for Environmental protection including the pollutants abatement of pollution, prevention of pollution.

- Environmental protection and pollution control has been the priority for the industry. Operations are conducted in a manner that protects the environment, conserve energy and natural resources.
- The Company has trained its employees in housekeeping, preventive maintenance etc., so that they can apply the policy of continuous improvement in their daily work.
- The Company is adopting quality management systems step by step. Proper production planning, excellent housekeeping measures and preventive maintenance have resulted in reduced consumption of raw material per unit of product output.

PART – I

Any other particulars in respect of Environmental Protection and Abetment of pollution.

- Environment protection and pollution control has been the priority for the industry. The industry has ensured that it is not using any prohibited and avoidable substances in the industrial process of manufacturing.
- The company is maintaining long term environment plans which shall be continuously adapted to developments, new discoveries and experiences related to the environment.
- The industry has ensured that, it is not using any prohibited and avoidable substances in the manufacturing process.

FIGURE: ETP FLOW DAIGRAM

FIGURE: ETP FLOW DAIGRAM

FIGURE: STACK MONITORING

FIGURE: AMBIENT MONITORING LOCATION

ANNEXURE- I

Seasonal Working of the Factory

Sl. No.	Particular	During the Previous Financial Year 2019-20	During the Current Financial Year 2020-21
1.	Actual Crushing days for the season	108	106
2.	Total Sugarcane crushed during the season (MT)	498172.577	575378.896
3.	Total Net Sugar produced (MT)	52994.35	62948.50
4.	Daily average Cane crushed (MT)	4612.709	5450.779
5.	Daily average of sugar produced (MT)	490.688	593.854

ANNEXURE- II

CHARACTERISTICS OF BAGASSE

Sl. No.	Parameter	Concentration in % except pH
1.	pH	4.5 to 5.7
2.	Nitrogen (%)	0.1 to 0.3
3.	Phosphorous (%)	0.2 to 0.3
4.	Potassium (%)	0.05 to 0.017
5.	Organic Carbon (%)	35 to 45

ANNEXURE- III

CHARACTERISTICS OF PRESS MUD

Sl. No.	Parameter	Concentration in % except pH
1.	pH	6.5 to 7.0
2.	Available Nitrogen (N)	1.05 to 1.50
3.	Potassium	0.50 to 0.85
4.	Phosphorous (P_2O_5)	2.20 to 3.00

ANNEXURE- IV

CHARACTERISTICS OF MOLASSES

Sl. No.	Parameter	Concentration in mg/l except pH and Colour
1.	pH	4.0 to 4.5
2.	Colour	Dark Brown
3.	TDS	2,30,000
4.	BOD	4,12,000
5.	COD	9,48,000
6.	Chlorides	30,000
7.	Sulphates	13,800