HSL/ENV/ENVTST/2023-24/

Date: 20/09/2024.

To,
The Environmental Officer,
Karnataka State Pollution Control Board,
#1 ,Auto Nagar Kanabargi Industrial Area ,
Belagavi- 590015.

Respect Madam/Sir,

Sub: Submission of Environmental Statement for the year 2023-2024.

With respect to the above subject we are here with submitting the **"Environmental Statement"** for the financial year 2023-2024 for our project M/S Harsha Sugars Ltd ,Savadatti village, savadatti Taluka ,Belagavi District.

Thanking You,

Yours faithfully,

For M/S Harsha Sugars Ltd,

(INWARD)

Authorized Signatory

Enclose- Form No-V

Analysis Reports

HARSHA SUGARS LIMITED
CIN U15122 KA 2014 PLC075717
SOUNDATTI

ENVIRONMENTAL STATEMENT

FOR THE YEAR 2023-2024.

SUBMITTED TO

KARNATAKA STATE POLLUTION CONTROL BOARD REGIONAL OFFICE, BELGAVI

BY

M/s. HARSHA SUGAR LIMITED

, SAUDATTI -TQ, BELGAVI – DIST.

FORM - V (See Rule – 14) Environment Protection Rules, 1986.

ENVIRONMENTAL AUDIT STATEMENT FOR FINANCIAL YEAR ENDING 31.03.2024.

ENVIRONMENTAL AUDITING:

Environmental auditing is a tool to objectively and systematically evaluate environment management system with the following objectives:

i) Waste prevention and reduction.

ii) Assessing compliance with regulatory requirements.

iii) Placing environmental information in the public domain.

Compliance with the regulatory norms, through adoption of clean technologies and improvement in management practices for prevention and control of pollution is not only mandatory but also has got wide acceptance among the industrial community. Charter on Corporate Responsibility for Environment Protection (CREP) also calls for commitment and voluntary initiatives of industry for responsible care of environment, which will help in building a partnership for pollution control.

In the view of the fact that the enforcement agencies are many times not equipped fully in terms of men power & other infrastructure to identify violation of Pollution Control norms by industries and since there is every likelihood that the enforcement agencies may monitor only limited number of industries spread over in different areas in the entire state, the Government intends to introduce a new scheme by the name **"Environmental Auditing Scheme".** In this scheme, technically qualified professionals (Auditors) become link between industries, Enforcement Agencies and Association of Industries, with added vital elements of Accountability and Transparency.

Objectives:

The environmental audit helps in pollution control, improved safety and health & conservation of natural resources and hence its overall objective can be started as achieving of sustainable development.

The objects of environmental audit in an industry are:

1) To determine the mass balance of various materials used and the performance of various processes equipments so as to identify the usage of materials in excess than required and to review the conservation efficiencies of process equipment and accordingly fix up norms for equipment /operations performance and minimization of wastes.

2) To identify the areas of water usage and waste water generation and determine the characteristics of waste water.

3) To determine the emissions, their sources, quantities and characteristics.

4) To determine the solid waste & hazardous waste generated their sources, their quantities and characteristics.

5) To identify the possibilities of waste minimization and recovery and recycling of waste.

6) To determine the performance of the existing waste treatment / control.

7) To consider system to modify or install additional equipment accordingly.

ABOUT THE INDUSTRY:

M/s HARSHA SUGARS LIMITED Located at SAUDATTTI, TQ, and BELGAVI – Dist. Pin 591126.

It has expanded its cane crushing capacity from 4500 TCD to 7500 TCD integrated with 30 MW co-gen plant with one No. of 110 ATA pressure boiler of 140 TPH steam flow capacity and the same were commissioned in the 2017-18 crushing season. The present plant capacity is 7500 TCD sugar plant with 30 MW captive power plants with working temperature 515°C.

Now proposed expansion of plant:

Sl No	Name of the Unit	Capacity
1.	Sugar Plant	7500 TCD
2	Co-gen Plant	30 MW

This unit is engaged in the production of sugar as per the customer needs. This unit is located in the area comprising of agricultural fields. The area has good facilities for setting up and running industries. General topography of the region is undulating terrain. The area is dry with red & black cotton soil and the ambient temperature varies between 28-41°C.

Sl.No.	Description	Sugar & co-gen complex (in Acres)	Distillery (In Acres)	Total area (in Acres)	Area distribution in %
1	Ground Coverage area	27.02	2.08	29.10	37.60
2	Hard paved area including roads	3.0	2.00	5.00	6.46
3	Greenbelt area	18.29	7.27	26.06	33.67
4	Vehicular parking area	9.0	1.09	10.09	13.03
5	future development	2.03	4.04	6.07	7.84
	Total plot area	59.31	18.08	77.39	

DETAILS OF COMPANY, CONTACT PERSON AND CURRENT STATUS OF THE PROJECT

1	Name, Designation & Contact Person Address of the company executive	**Mrs. Laxmi R Hebbalkar** **M/s Harsha Sugars Limited** **Sy No 411/1, 411/2,413/1, 412, 411/3, 375, 407/1, 407/2+3 Savadatti Village, Savadatti Taluk, Belgavi.** **TQ: SAUDATTI** **Dist: BELGAVI-591126** **Karnataka- state** **Mobile: +91 7338662031/9404428328**.
2	E-mail address	gmharshasugars@gmail.com
3	Company E-mail Id and web site	harshasugars@gmail.com www.harshasugars.com
4	Name & contact details of responsible person	**Mahammedshafeeq.** **Chief Environment Officer.** E mail: env.harshasugars@gmail.com Contact No: +91 8105967496.
5	Current status of the project	**Harsha Sugars Ltd, in an existing industry located at Sy No. 411/1, 411/2,413/1, 412, 411/3, 375, 407/1, 407/2+3 Savadatti Village & Taluk, Belgaum District. The industry is engaged in manufacture of white crystal sugar with sugar cane crushing of 4500 TCD and Power Generation using Co-generation power plant of 14 MW. The Board has issued consent for operation for the said activity for the period up to 30.06.2027. Vide Combined Consent Order No. AW- 332838 with PCB ID- 35496 dated 19.08.2022 and AW-334854 PCB ID-35496 Dated 09.12.2022 valid up to 30.06.2027. The Industry enhanced the production of capacity of sugar cane crushing 4500 TCD to 7500 TCD , Power Generation Capacity Unit 14 MW to 30 MW and established new molasses based distillery of 60 KLPD (RS/Ethanol/ENA) and Installed new incineration boiler of 22 TPH with power generation of 3 MW. The industry has obtained Environment Clearance from MoEF and CC vide F. No.J-1101 /236/2017-IA – II (I) Dated 17.06.2019. The industry has applied for CFE of the Board under both the acts for enhancing capacity sugar cane crushing from 4500 TCD 7500 TCD , Power generation capacity of Co-**

		generation unit from 14 MW to 30 MW and establishment of new molasses based distillery for production of 60 KLPD RS/Ethanol/ENA and installed new incineration boiler of 22 MW with power generation of 3 MW.

GENERAL INFORMATION:

1	Total area in acres	77.39 Acres
2	Total capital investment	:Rs. 342.65 (98.32 Cr. Distillery) Crores = 440.97 Cr.
3	Category of the industry	: Large
4	Classification of industry	: Red
5	Laboratory equipments available for water and air pollution monitoring	a) PH Meter b) Conductivity Meter c) Muffle Furnace d) C.O.D. digester e) B.O.D. Incubator
6	Air Pollution Control	The industry has complied with the stipulations made in the Air pollution control consent under section 21 of the Air Act, 1981.

Operation during the period of audit:

i) Working days per year : Sugar Plant : 133 days.

: Co-gen Plant : 137 Days.

: Incineration boiler: 195 Days.

: Distillery : 157 Days

ii) Working days per week : 07 days.

iii) No. Of working shifts : 03 Shifts.

No. of Employees : During season – 352.

: During Off season – 346.

Production Details

Details for the Cane Crushed at Season 2022-23.		Season 2023-24	Distillery Production 2023-24
1) Cane crushed	677207.227 MT	640015 MT	Ethanol = 2432.68 KL
2) Sugar produced	74547.0 MT	66562 MT	
3) Press Mud Generated	16405 MT	19016 MT	ENA= 5112.777 KL
4) Molasses Produced	29735.380 MT	26777.80 MT	
5) Bagasse Produced	203685.23 MT	192825.05 MT	
6) Power Consumed % cane	32.10%	32.89%	IS = 411.826 KL
7) Steam Consumed % cane	37.34%	36.85%	
8) Bagasse Produced % cane	30.08%	30.13%	RS= 86.589 KL
9) Lime Consumed	1067.37 MT	704 MT (ETP 188 MT+704 = 892)	
10) Sulphur Consumed	274.15 MT	230 MT	
11) Lime % Cane	0.158%	0.110%	
12) Sulphur % Cane	0.04%	0.036%	

INFORMATION ABOUT MANUFACTURING PROCESS:

A) SUGAR:

The sugar manufacturing involves mainly five stages i.e. crushing of sugar cane, juice clarification, crystallization, curing, grading, and bagging. The details of these five stages are furnished below.

i.Crushing of Sugarcane.

Sugar cane is harvested in the fields, dressed and bundled in small bundles, stacked in Lorries, tractor trailers or bullock carts, supplied to factories, weighed and crushed in a set of mills.

Crushing takes place mainly in two stages: first, preparation and then milling. Milling takes place after preparing the cane in leveler, cutter and fibrizer. The prepared cane is then crushed by passing through 4 sets of mills. Weighed water is added in the course of crushing as imbibitions water for better extraction of juices. After crushing the bagasse is sent to boiler as fuel and juice is sent for purification and recovery of sugar.

ii. **Juice Clarification (Double Sulphitation**).

The weighed juice is primarily heated in juice heaters at 65°C to 70°C. It undergoes a process of clarification i.e., addition of lime and sulphur dioxide simultaneously. The sulphited juice is heated again in another set of juice heater at 100°C to 105°C. The hot juice is decanted out from the clarifier and sent for evaporation in a set of multiple effect evaporator bodies. These evaporators are designed for steam economy (quintuple effect of evaporation). The juice thus evaporated gets concentrated to for thick syrup of about 58° to 60° brix. The syrup obtained is again mixed with SO2 gas to pH of 5.0 – 5.2 for the purpose of bleaching.

iii. Crystallization.

The sulphited syrup is sent to pan floor for further concentration in vacuum pans. The syrup collected in supply tanks is taken to pans for boiling where it concentrates and attains super saturation stage. In such a condition sugar grains are formed in the syrup. The syrup mass with sugar particles is called massecuite. The massecuite is dropped in crystallizer and cooled to complete the crystallization.

iv. Curing.

Massecuite is taken into the centrifugal machines. Sugar Crystals are separated from mother liquor in high-speed centrifugal machines. Sugar is separated and sent to drier. Non – crystallizable matter from the syrup called molasses drained out form the centrifuge and then weighed and sent to storage tank.

v. Drying, Grading and Bagging.

Sugar is dried in the vibrating hopper and graded by passing through standard sieves. The graded sugar is bagged and weighed for 50 (50 Kg) – kg net, stitched numbered and stacked in sugar godown.

A. CO-GENERATION OF POWER:

The plant is installed with high-pressure boilers for generation of power and process steam for the sugar plant. When high-pressure steam is passed through the turbine, the turbine is rotated at high speed, which in turn runs the alternator to produce electric power.

The high-pressure steam is passed through extraction cum condensation type turbine. Part of the low-pressure steam is extracted from the turbine for use in sugar plant and power plant. Balance steam is totally condensed in surface condenser. Low-pressure steam requirement is high during cane crushing season. During off-season, most of the steam is condensed.

3. WATER REQUIREMENT:

The requirements of water for this unit are as follows.

i) Boiler feed and cooling tower makeup.
ii) Internal plant cooling for sulphur burners, air compressors, vacuum pumps, etc.
iii) Domestic use.
iv) During periodical cleaning of sugar unit.
v) Cooling water for multi-jet condensers.

HOT WATER GENERATION – The sugar factory has a large amount of condensates available from various heat exchangers, juice heaters, evaporators, vacuum pans etc.

USE OF HOT WATER – Condensate water from the evaporator bodies are cooled in fan-less cooling towers and treated with cooling tower water. This treated & cooled water will be used for co-gen cooling tower makeup, filter cake washings, Molasses dilution, Milk of lime preparation, magma preparation, massecuite washing and floor washing purposes.

The total quantity of excess condensate water generated by this unit is around 1400 cum/day and utilized in effective manner to conserve the fresh water.

4. WASTE WATER QUANTITY AND QUALITY:

The source of waste water generation is mill house, spills and the washing of boiling house. The total waste water generated by this unit is around 290 m3/day during full load of crushing.

5. WATER POLLUTION CONTROL:

The existing effluent treatment plant compromises of:

1) Screen chambers, (02 No.)
2) Oil and grease traps, (04 No.)
3) Intermediate Collection tank, (01 No).
4) Lime preparation tank (1 No).
5) Equalization tank with diffused aeration system (01 No).
6) Monthly Washing tank (01 No).
7) Tube settler (01 No).
8) Buffer tank (01 No).
9) Anaerobic Digester (UASB = Up Flow Anaerobic Sludge Blanket)
10) Pre aeration tank (01 No)
11) Aeration tank with diffused system (01 No)
12) Secondary Clarifier (01 No)
13) Filter feed tank (01 No)
14) Treated water tank (01 No).
15) Sludge Drying beds.
16) 15 Days Storage tank.

6. AIR POLLUTION SOURCES AND CONTROL MEASURES:

The major air pollution source is 140 TPH Boiler installed to generate the steam. The air pollution control equipment is Electro-Static Precipitator attached to 85 m Chimney.

Boilers	**140 TPH (Existing)**	**22 TPH (Existing)**
Stack height	85 m	70 m
Velocity, m/s	10	10
Stack dia	3.5	2.8
Emission rate without APC , g/sec		
PM	125.8	58.5
SO_2	4.47	20.62
NO_2	22.93	48.4

Technical Specification of Chimney

Design volume	419400 cum/hr
Design temperature	1300 C
Inlet dust concentration	6 gm/nm3
Efficiency	99.0 %
No of gas passages	18
Velocity through ESP	0.48 m/s
Treatment time	21.3 sec
Outlet dust concentration	<150 mg/m3

7. SOLID WASTES:

The sources-quantity and disposal of solid wastes from this unit are as follows.

i) **Bagasse** – Sugarcane is subjected to crushing and extracting process in milling tandem. The residue left over is baggase which is around 29-30% on cane crushed containing 50% moisture. Bagasse is used as fuel in boiler for generating steam required for the sugar manufacturing process as well as for power generation.

ii) **Press-Mud** – Press-mud contains all non-sucrose impurities along with CaCO3 precipitate and sulphate. Press – mud from double sulphitation process contains valuable nutrients like Nitrogen, Phosphorous, and Potassium etc. and is used as manure. We are distributing Press-mud to cane grower & local farmers to use as organic manure.

Lime grit – Burnt Lime is hydrated in a separate vessel to obtain 80-85% of CaO. The residue is being lime grit which constitutes around 2.00% is used for filling low lying areas in the factory premises. To fill the debris land and fillings.

iii) **Effluent sludge** – The sludge from effluent treatment plant is taken to the sludge drying beds. The dried sludge is used as manure & local farmers are applying the dried sludge to their fields as manure.

iv) **Boiler Ash** – The Boiler ash mixed with the press mud and given to farmers as Inorganic manure and also sold to brick manufacturers.

I) FRESH WATER CONSUMPTION (2023- 2024 SEASON)

Sl No	**Name of the product**	**Current financial year (2023 -2024) KL / year**
1	Domestic Process	**2560**
2	Process (Distillery)	**1000**
3	Boiler	**22318**
4	Cooling	**-**
5	Others(Fire Fighting, washings)	**7695**
6	WTP/Backwash water	**1241**
	Total	**34814 M3**

Fresh water consumption in M3/year (for sugar & water units).

Note: Process condensate cooled and recycled water used for process, Mechanical cooling Mill bearing cooling, Sulphur burner cooling etc = 1400 M3/Day.

Recycle & Reuse:

Sl No	**Description**	**Recycled**	**2023 -2024**
1	Boiler Blow down	Cooling tower (Co- gen).	190
2	Co-gen cooling blow down.	Sugar service water tank.	4182
3	Hot water Recycling.	Sugar cooling tower, Mill bearing cooling MOL preparation.	1400

a) Waste prevention and reduction:

The industry has adopted water conservation measure for the optimal use of water. The industry has adopted recycling of Boiler Blow down and cooling tower blow down since commencement of the sugar plant .In addition, the industry has adopted the condensate recycling system in 2020.The company has adopted **3R Policy (Reduce, Recycle & Reuse).**

b) Compliance with regulatory requirements:

During 2023-2024 Season, the industry has operated both the sugar plant and co-generation Plant. The sugar plant and co –gen plants were operated during 2023-24 season for 133 days and 137 days respectively. The fresh water consumption was **185 KL/Day** during 2023 - 2024 season. However the water consumption is well within the consent limits i.e. **350 KL/Day** (for sugar & Co-gen Plant).

WATER BALANCE SHEET FOR YEAR 2023 -2024.

Water consumption	**Consumption (KL/Year)**				**Discharge (KL/Year)**		
Domestic	Sugar	Co – gen	Distillery	General	Sugar	Co-gen	Distillery
	2560			-	**2500**		
Gardening &Green belt		-	-	-	-	-	-

Industrial Purpose:

Process		-	-	-	**41582 Excess Spray pond water**	**-**	-
Washings, Fire fighting	**7695**		-	-	**7590**		-
Boiler feed		**22318**	-	-			-
Cooling		**-**	-	-	**6440**	**4182 (CT Blow-down)**	-
Distillery Process	**1000**	**-**	-	-	**-**	**-**	-

WTP/Backwash water		**1241**	-	-	-	-	--
Total	**34814 KL**				**62294 KL**		

i) Waste Prevention & Reduction:

The waste water from toilets is discharged in the septic tank and soak pit. The boiler blow down is re-used to the co- gen cooling tower. The co-gen cooling tower blow down water is re-used to the sugar service tank. The regeneration and back wash water of WTP is blended with treated effluent and the same is used for green belt development. The excess sugar condensate is recycled to co-gen / sugar cooling tower as make–up.

ii) Compliance with regulatory requirements:

The water discharged is treated, used and recycled for green belt development. However the waste water discharge from the sugar process, washings and sugar spray pond overflow is **290** KLD and the discharge limits falls well within the consent limits of **500 KLD.**

2.0 DETAILS OF RAW MATERIAL CONSUMPTION AND PRODUCTS.

Name of the Raw material	**Name of the product**	**Consumption of Raw material /Annum**	**Consumption of Raw material /Annum.**
		Year 2022-23.	**Year 2023 -2024.**
1) Sugar cane	Sugar Plant	**677207.227 MT**	**640015 MT**
2) Lime	Sugar Plant	**1067.37 MT**	**704 MT**
3) Sulphur	Sugar Plant	**274.15 MT**	**230 MT**
Product Details			
1)White crystal Sugar	Sugar Plant	**74547 MT**	**66562 MT**
2) Molasses	Sugar Plant	**29735.3 MT**	**26777.80 MT**
3) Press mud	Sugar Plant	**16405 MT**	**19016 MT**
4) Bagasse	Power Plant	**203703.92 MT**	**192836.51 MT**
5) Electric Power	Power Plant	**33.63 KWH/MT**	**32.89 KWH/MT**

1. Waste Prevention and reduction:

The industry has adopted conservation measures for the optimal use of resources.

2. Compliance with regulatory requirements:

The consent granted for crushing of sugar cane of capacity 4500 TCD and Co – generation of capacity of 14 MW.

PART – C

Pollutants discharged to environment /Unit of out Put (As specified in the consent issued)

Summary of Effluent Quality Analysis Report by M/sHarsha Sugars Ltd.–Outlet for the months of Nov 2023 to March-2024								
Sl No.	Parameters	Unit	November	December	January	February	March	AVERAGE
1	pH	-	6.99	7.01	7.09	7.92	8	7.39
2	Colour	Hazen	<1	<1	<1	<1	<1	<1
3	Odour	-	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
4	Total Nitrogen	mg/L	14.15	15.98	7.8	8.36	8.5	10.97
5	Ammonical Nitrogen	mg/L	0.28	0.56	BDL	0.56	0.8	0.54
6	Total Suspended Solids	mg/L	9	7	8	7	8	7.80
7	Chemical Oxygen Demand	mg/L	84	104	80	84	90	88.40
8	BOD(3days@ 270C)	mg/L	28	30	26	22	29	27
9	Oil&Grease	mg/L	BDL	BDL	BDL	BDL	BDL	BDL
10	Faecal Coliform	Present/Absent/100ml	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8

i) Waste prevention and reduction:

The industry has adopted Air Pollution controlling measures for the minimization of Air pollution from the Boiler. An Electro Static Precipitator (ESP) with two fields charged has been equipped to control the air pollution. The Ambient Air Quality and Stack Emissions are well within the prescribed KSPCB limits.

ii) Compliance with regulatory requirements:

One chimney of height 85 meters along with ESP measures have been erected for boiler of 140 TPH and DG set of 320 KV respectively. The stack monitoring values are meeting standards as laid down by the board.

PART – D

HAZARDOUS WASTES:

(As specified under the hazardous waste / Management and handling Rules 2008)

Hazardous Wastes	Total Quantity (KL)	
	Current financial year (2022 -2023)	Current financial year (2023 -2024)
a. From process 1. Waste Oil from DG set/ Spent turbine Oil waste	0.015 KL/A	0.016 KL/A
b. From Pollution control facilities Boiler Fly Ash (Non – Hazardous)	4571.67	4494 MT

i) Waste prevention and reduction:

The industry has adopted safety measures for handling the hazardous wastes. Wastes are stored in MS container and stored in the separate yards. The collected waste oil is reused as lubricant in track chain carrier / bagasse conveyors / elevators etc inside the factory premises.

ii) Compliance with regulatory requirements:

The waste oil from the DG is not exceeding the consent limits of 0.016 KL/Annum .The industry is complying with the hazardous waste of 0.6KL/Annum. (Management & Handling) Rules 2008 as amended in 2010.

PART – E

SOLID WASTES:

Particulars	**Total Quantity (MT)**	
	Current financial year 2023 -2022	**Current financial year 2022 -2024**
a) from Process		
1.Bagasse 2.Press Mud 3.Lime Grit	203685.23 MT 16405 MT 18 MT	192825.05 MT 19016 MT 17 MT
From Pollution Control facilities:		
1. ETP sludge 2.Boiler Ash 3.Lime Grit	5 MT 4571.67 18 MT	3 MT 4494 MT 17 MT
Sold	**19016** MT of Press mud is sold to the farmers to use as Inorganic manure in the agricultural fields. Ash quantity sold **4410** MT.	

i) Waste prevention & Reduction:

The industry has adopted solid waste management practice for proper tracking and managing the wastes in order to recover the energy. The Bagasse is used as a fuel, press-mud, Boiler ash and ETP sludge is used as manure for utilization of farmer's field and also within the industry.

ii) Compliance with regulatory requirements:

The industry is managing the solid waste like ETP sludge and ash from boilers in a manner such that it is not causing any pollution and the lime grit is used for road making, fillings on the low lying area.

PART - F

Please specify characterization (In terms of composition and quantum) of **hazardous** as well as **solid waste** indicates disposal practice adopted for both these categories of wastes.

Nature of wastes	Quantity per Year	Mode of disposal
a) Hazardous wastes : 1.) Waste Oil from DG set / others	0.016 KL	Collected in the MS barrels and used as lubricant in the track chain conveyor s/elevators, sprockets etc inside the factory premises.
b). Solid Wastes :		
1. ETP sludge	3 MT	Used as manure.
2.Boiler Ash	4494 MT	Mixed with press mud and used as manure.
3.Lime Grit	17 MT	For Road formation & used in fillings the low lying areas.
4.Bagasse	192825.05 MT	Used as fuel in the Boiler.
5.Pressmud	19016 MT	Mixed with fly ash and supplied to the farmer as Inorganic manure.

PART – G

I) Impact of the pollution control measures on conservation of natural resources and consequently on the cost of production.

a) For chemicals used in Effluent Treatment Plant.

The treatment chemicals which are using for ETP are of **Non – hazardous** in nature and effective, which does not cause any harm if exposed Eg: Cow dung, urea & DAP which are already using as manure for fertile lands.

b) The treated effluent will be used to irrigate the nearby cane farms of farmer's field of 115 acres and green belt of 40 acres with prior consent from Government authorities and also used for 9 Acres own land field where cane grown.

PART – H

II) Additional investment proposal for environmental protection including abatement of Pollution.

We have invested Rs. 1 Crore towards the ETP expansion work (Monthly Washing tank, Total Solid Settling tank Completed and Anaerobic, Clarifier, 15 Days storage tank yet to be completed), to comply with the directions given by KSPCB in affidavit submitted to KSPCB.

As per the Statutory requirement of Sugar Condensate Polishing Unit is under construction to treat Excess Condensate generated in the Sugar Process.

Distillery has erected and Commissioned with ZLD and with ZSD

The expenditure incurred on the maintenance and running of the ETP works out to be 58 lakhs rupees this year. This includes the cost of chemicals, machinery repairs, replacement of parts, labour etc.

The Expenditure of 6 Lakhs towards Mechanical Pipeline replacement work UASBR and pipes lines for distribution of treated water.

The company has already adopted various quality systems and improved manufacturing discipline. This has resulted in material conservation and waste reduction this year.

The industry has reduced its fuel consumption this year considerably compared to previous year. The indirect benefits are lesser emission of pollutants, maintenance of ambient air quality and energy conservation.

1. The industry will plan to develop the green belt in **about 07 acres. Additional 8100 Saplings is planted this year with our existing 25000 (survided 8300) tree saplings.**

2. Good Housekeeping is being maintained in the factory premises. We have deputed **civil workmen for cleaning and greenery development in around the factory premises. The Cleaning photos are attached as Annexure -**

3. Water spraying on the main roads to avoid the dust pollution or to suppress the flying of dust occurring due to cane vehicle movement during the season.

5. Online dust monitoring unit and online effluent treated water monitoring equipments are provided for close monitoring.

PART – I

Any other particulars for improving quality of environment**.**

The industrial Management adopted pollution control measure for protecting surrounding environment.

The concentration of pollutants is well within the limits as prescribed by the **KSPCB.**

a. An environmental cell/ Committee have been formed as followed:

ii) **Mahammedshafeeq Chief Environmental Officer (M.Sc Chemistry, EHS Certified).**

ii) S. L Sambrekar (Manager Distillery-Msc.-Alcohol tech.)

iii) Vishwanath Patil (Manager - Civil)

ii) Vishnu Dhundre Production Manager (MSc.Sugar technology).

iii) Sambhaji Patil Sr.Chemist (BSc.)

b. The factory has a full- fledged Laboratory for carrying out water analysis.
c. Environmental protection and pollution control has been the priority for the industry.

d. Reuse of back wash water for spraying at Bagasse and as well as in the sugar unit to reduce the fresh water consumption.

e. Reuse of excess condensate water after treatment as cooling tower make -up to reduce the fresh water consumption.

Eg; spraying of water on bagasse to arrest fugitive emissions.

Greenery Development at plant