



ATHANI SUGARS LIMITED

Regd. Off. & Factory : Vishnuannagar, Post : Navalihai-591 234, Tal. : Athani, Dist. : Belgaum,
Karnataka State, Phone : 08339-280100, 01, 02 Fax : 08339-280103
E-mail : info@athanisugars.com

Branch Office : 'Shiv Pavillion', 2nd Floor, Near Ram Mandir, Sangli-Miraj Road,
Sangli - 416 416 Maharashtra State, Phone : 0233-2373885

Ref: ASL/ENV/2021-22/ 388

Date: 01.09.2021

To,
The Regional Officer,
Regional office, Belagavi-2
Karnataka State Pollution Control Board,
Plot No.3224/3, Hanuman Nivas,
1st Floor, B.K College Road,
Chikkodi-591 201, Belagavi District.


Subject: Submission of Environment Audit Report (Form-V) for the year ending
on 31st March 2021 Reg.

Dear Sir,

In reference to the subject cited above, we are submitting herewith
Environment Audit report (Form-V) for the year ending on 31st March 2021
for your kind reference. Kindly acknowledge the same.

Thanking you,

Yours faithfully,


Executive Director
(Shri. Yogesh Patil)

Copy To: As Above.

Copy To:

1. The Member Secretary,
KSPCB, Parisara Bhavan, 1st to 5th floor,
#49, Church Street, Bangaluru-560001

**ENVIRONMENTAL AUDIT REPORT
FOR
THE FINANCIAL YEAR 2020-21
OF**

ATHANI SUGARS LIMITED

**Vishnuannanagar,
P.O. Navalihal – 591 234,
Tal: Athani, Dist: Belagavi.**



**Submitted to
Karnataka State Pollution Control Board,
Regional Office, Chikkodi, Belagavi District.**

ENVIRONMENTAL AUDIT REPORT

1. Introduction:

Like Financial Auditing which is conducted every year to have an accountability of financial inflows & outflows, profit etc. Environmental auditing is a new concept which would give the accountability of the issues related to environment. Environment audit is an exercise of self assessment to minimize the generation of wastes & pollution potential. This technique is basically a part of industries internal procedures in meeting their responsibilities towards the better environment.

2. Objectives:

The environmental audit helps in pollution control, improved production, safety & conservation of natural resources.

A. To determine the mass balance of various materials used & 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 & accordingly fix up norms for equipment / operation performance & minimization of wastes.

- a. To identify the areas of water usage & waste water generation & to determine the characteristics of waste water.
- b. To determine the solid wastes & Hazardous wastes generated, their sources, quantities & characteristics.
- c. To determine the possibility of wastes minimization, recovery & recycling of wastes.

B. To identify the possibility of wastes minimization, recovery & recycling of wastes.

C. 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 THE 31ST MARCH 2021.

SUGAR FACTORY

PART - A

1. Name and address of the owner/ Occupier of the industry, operation/ Process	Shri Yogesh S Patil, Executive Director M/s Athani Sugars Limited. Vishnuannanagar, P.O. Navalihal – 591 234, Tal: Athani, Dist: Belagavi.
2. Industry Category Primary- (SIC Code) Secondary (SIC Code)	: Large Scale – Red. : 2000 : 2061
3. Production Capacity – Unit	12000 TCD Sugar Plant.
4. Year of Establishment	4500 TCD Sugar Plant: Nov-2001. 12000 TCD Sugar Plant: Feb 2018.
5. Date of the last Environmental Statement Submitted	22 nd September 2020

PART – B

WATER AND RAW MATERIAL CONSUMPTION

1. Water Consumption (m³/day):

Sr. No.	Operation	During the Previous Financial Year 2019-2020	During the Current Financial Year 2020-2021
1.	Process	500	700
2.	Cooling	250	300
3.	Domestic	200	200

(In Sugar Plant for process and cooling purpose CPU recycled water used)

2. Products:

Sr. No.	Name of Product	Process Water Consumption per product output (Lit / kg of Sugar Produced)	
		During the previous financial year 2019-2020	During the Current financial year 2020-21
1.	Sugar	1.28	1.02

3 Raw Material Consumption:

Sr. No.	Raw Material	Product	Consumption of Raw Material Per unit of Output. (Kg /Quintal of Sugar Produced)	
			2019-20	2020-21
		Sugar		
1.	Sugar Cane		937.93	908.80
2.	Bagasse used as fuel		275.61	252.10
3.	Lime		1.92	1.513
4.	O.P. Acid		0.04580	0.02984
5.	Sulphur		0.666	0.502
6.	Caustic Soda		0.1695	0.0401
7.	Lubricants		0.32	0.015
8.	Steam		424.88	395.00
9.	Power KW/Qtl. of Sugar		25.74	22.075
		By-Product	Kg /Quintal of Sugar Produced	
		1. Molasses	46.99	42.00
		2. Baggasse	264.19	252.10
		3. Press mud	23.80	24.43

Sr. No.	Particulars	Season 2019-2020	Season 2020-2021
1.	Total Sugar Cane Crushed (M.T.)	636352.312	1382418.884
2.	Total Sugar Produced (M.T.)	67846.000	152115.00

(Industry may use codes if disclosing the details of raw material would violate any contractual obligations, otherwise all the industries have to name the raw materials used.

PART - C

POLLUTION DISCHARGED TO ENVIRONMENT PER UNIT OF OUTPUT (PARAMETER AS SPECIFIED IN THE CONSENT ISSUED)

Sr. No.	Pollutants	Quantity (KLD)	Influent Concentration Kg/day	Concentration Discharged Kg/day	Percentage of Variation prescribed standard with reasons
1.	Wastewater	1200	2305.34	98.87	-
2.	Air	Combined with Co-gen.			--
3.	Noise (db)	NA	Reports submitted.		--

PART - D**HAZARDOUS WASTE**

As per specified under Hazardous Waste (Management and Handling) Rules, 1989.

Sr. No.	Hazardous Waste	Total Quantity (Tonnes)	
		During the Previous Financial Year 2019-2020	During the current Financial Year 2020-2021
1.	From process	0.450	0.300
2.	From Pollution Control Facilities a) Oil & grease	0.00	0.00
	Total:	0.450	0.300

PART - E**SOLID WASTES**

Sr. No.	Solid Waste	Total Quantity (MT)	
		During the Previous Financial Year 2019-2020	During the current Financial Year 2020-2021
1.	From Process (by products) 1. Bagasse 2. Press mud	179247.000 16143.000	403361.884 37165.000
2.	From pollution control facilities 1. Oil & grease 2. Biological Sludge	0.450 80	0.300 160
3.	Quantity recycled or reutilized within the unit. 1. Press mud used in Bio-Compost 2. Sludge Disposed: i) Oil & Grease (Oil and grease is sell to KSPCB authorized Recycler.)	16143.00 80 0.450	37165.000 160 0.250

PART - F

Please specify the characteristics (In terms of concentrations and quantity) of hazardous wastes as well as solid wastes and indicate disposal practice adopted for both the categories of wastes.

Hazardous wastes: Used oil.

Disposal: Oil and grease is sold to KSPCB authorized recycler.

By Products (Solids): Characteristics of Bagasse and Press mud.

Sr. No.	Parameter	Unit	Bagasse	Press mud
1	pH		3.2	4.0
2	Moisture	%	8.8	24.9
3	Nitrogen	%	0.12	0.73
4	Phosphorous	%	0.03	0.017
5	Potassium	%	0.5	0.82
6	Volatile solids	%	56.3	71.6
7	Ash Content	%	0.9	2.8
8	Organic Carbon	%	11.4	22.1

Note: 1. Bagasse is used as a fuel in boiler

2. Press mud is used for manufacture of Bio-compost.

PART - G

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

The treated effluent is utilized on land for irrigation purpose. There is excellent return to the farmers by way of recycling nutrients. There is no significant impact on the cost of production.

PART - H

Additional measures / investments proposal for environmental protection including abatement of pollution, prevention of pollution.

1. The 1400 m³/d capacity USBR anaerobic digester installed to treated waste sugar waste in ETP.
2. The industry has installed CPU (190m³/hr)unit for treatment of sugar condensate water, RO rejection water and evaporation condensate water spent lees will be treated in it and treated water is reused in Sugar plant & distillery process, cooling tower, spray pond and pump equipment cooling purpose due to this raw water consumption is reduced.

3. The industry has installed ESP system to control air pollution to 130 TPH baggase & 145 TPH Baggase base Boiler of 24 MW & 28 MW co-gen plant and 18 TPH Coal –Biogas based Boiler.

As per consent order and CPCB guideline we have installed online monitoring system for 18 TPH distillery stack to measure Particulate matter (PM) and it's connected to CPCB server.

PART - I

Any other particulars for improving the quality of environment.

(Please refer “Environmental Statement in Brief”)

Avg. Analysis Report of Sugar ETP effluent parameter during season 2020-21

Sr. No.	Parameter	Unit	Untreated	Treated
1	PH	-	4.75	7.52
2	Bio-chemical Oxygen Demand	mg / l	1646.67	70.67
3	Suspended solids	mg / l	150.67	48.00
4	Total Dissolved Solids	mg / l	3321.00	1219.00
5	Chlorides	mg / l	358.5	164.83
6	Sulphate	mg / l	307.41	198.27
7	Oil & Grease	mg / l	10	-

The online monitoring system and flow meter is installed to sugar ETP treated effluent to measure pH, COD, BOD, TSS, Flow and it is connected to CPCB server.



FORM - V

ENVIRONMENTAL STATEMENT FOR THE FINANCIAL YEAR ENDING THE 31ST MARCH 2021.

DISTILLERY

PART - A

1. Name and address of the owner/Occupier of the industry, operation/ process	Shri Yogesh S Patil, Executive Director M/s Athani Sugars Limited. Vishnuannanagar, P.O. Navalihal – 591 234, Tal: Athani, Dist: Belagavi.
2. Industry Category Primary- (SIC Code) Secondary (SIC Code)	: Large Scale - Red : 2000 : 9998
3. Production Capacity – Unit	90 KLPD Distillery plant.
4. Year of Establishment	60 KLPD: Feb 2008. 90 KLPD: Feb 2018.
5. Date of the last Environmental Statement Submitted	22 nd September 2020.

PART - B

WATER AND RAW MATERIAL CONSUMPTION

2. Water Consumption (m³/day):

Sr. No.	Operation	During the Previous Financial Year 2019-2020	During the current Financial Year 2020-2021
1.	Process	600	512
2.	Cooling	350	288
3.	Domestic	Considered in sugar factory	

2. Products:

Sr. No.	Name of Product	Process Water Consumption per product output (KL/KL of Spirit produced)	
		During the Previous Financial Year 2019-2020	During the Current Financial Year 2020-2021
1.	E N A , Impure spirit	10.49	11.08

3. Raw Material Consumption:

Sr. No.	Raw Material	Product	Consumption of Raw Material Per Unit of Output. (Kg /KL of Spirit produced)	
			2019-2020	2020-2021
		Spirit		
1.	Molasses		3165.336	3558.718
2.	Yeast		-	-
3.	Antifoam		1.09	0.87
4.	Steam		2569.893	2837.396
5.	Power KW/KL		103.10	117.29
		By-product	Liters/KL of spirit produced.	
		Fusel Oil	-	-

Note: We have adopted Continuous fermentation system to our Distillery plant.

Sr. No.	Product	Total Quantity Produced (In KL)	
		Financial Year 2019-2020	Financial Year 2020-2021
1.	ENA	22281.419	19881.841
2.	Impure spirit	2165.759	Nil
3.	Fusel Oil	Nil	Nil
4.	Ethanol	546.437 Re-distillation: 3165.887	1575.633
5.	Rectified Sprit	-	Nil

Industry may use codes if disclosing the details of raw material would violate any contractual obligations, otherwise all the industries have to name the raw materials used.

PART - C

POLLUTION DISCHARGED TO ENVIRONMENT PER UNIT OF OUTPUT (PARAMETER AS SPECIFIED IN THE CONSENT ISSUED)

Sr. No.	Pollutants	Quantity (KLD)	Distillery Influent Concentration Kg/day	Concentration Discharged Kg /day	Percentage of Variation prescribed standard with reasons
1.	Wastewater	720	36000	13680	--
2.	Air	Combined with Co- gen.			--
3.	Noise (db)	Reports submitted.			--

PART - D

HAZARDOUS WASTE

As per specified under Hazardous Waste (Management and Handling) Rules, 1989.

Sr. No.	Hazardous Waste	Total Quantity (Tonnes)	
		During the current Financial Year 2019-2020	During the current Financial Year 2020-2021
1.	From process	--	--
2.	From Pollution Control Facilities	NA	NA

PART - E

SOLID WASTE

Sr. No.	Solid Waste	Total Quantity in Tonnes	
		During the Previous Financial Year 2019-2020	During the current Financial Year 2020-2021
1.	From Process (by products) a) Yeast Sludge	4860	5000
2.	From Pollution Control Facilities	NA	NA
3.	Quantity recycled or reutilized within the unit. Yeast sludge is mixed with Bio-compost.	4860	5000

PART - F

Please specify the characteristics (In terms of concentrations and quantity) of hazardous wastes as well as solid wastes and indicate disposal practice adopted for both the categories of wastes.

Hazardous waste: Not applicable

By Products (Solids): Characteristics Yeast sludge.

Sr. No.	Parameter	Unit	Observed value
1.	pH		4.2 - 4.5
2.	Nitrogen	%	2.8 - 3.5
3.	Phosphorous	%	2.0 - 3.0
4.	Potassium	%	4.7 - 5.8
5.	Volatile Matter	%	65 - 70
6.	Ash Content	%	30 - 35

Note: The general characteristics are shown and specific characterization is not Carried for this particular industry.

Avg. Analysis Report of Raw spent wash and bio-methinated spent wash parameter during season 2020-21

Sr. No.	Parameter	Unit	Spent Wash	Bio-methenated spent wash
1	PH		3.82	7.56
2	Alkalinity	mg / l	1622.5	1856
3	Chemical Oxygen Demand	mg / l	120000	36000
4	Bio-chemical Oxygen Demand	mg / l	50000	19000
5	TSS	mg / l	391.5	485
6	Total Solids	mg / l	14984.5	7828.75
7	Chlorides	mg / l	47833.55	8015.90
8	Sulphate	mg / l	9021.45	4345.45
9	Potassium	mg / l	861	669.75

Avg. Analysis Report of Bio-compost parameter during season 2020-21

Sr. No.	Parameters	Unit	Bio-Compost
1	Moisture	%	26.61
2	Nitrogen	%	1.738
3	Phosphorus	%	1.698
4	Potassium	%	2.396
5	Organic Carbon	%	22.20
6	C/N Ratio	-	12.80

PART - G

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

To treat distillery spent-wash, we have two nos of CSTR Biodigestor having capacity 450 m³/day each. The generated biogas is utilized as a fuel for cogen and distillery boiler. Biomethanated effluent is being feed to seven effect falling film multi evaporation system (capacity 900KLD). Evaporation condensate water treated in condensate polishing unit (CPU) and used in distillery plant for process and cooling towers and evaporated concentrated effluent is spared on press mud to produce compost. This compost is sold to our cane supplier farmers on no loss & no profit basis. The farmers are highly benefited by using this bio-compost.

PART - H

Additional measures / investments proposal for environmental protection including abatement of pollution, prevention of pollution.

- Two number of anaerobic digester is installed having capacity of 450 m³/day each. Cost of each digester is around Rs. 480 lakhs.
- Seven effect falling film multi evaporation system is installed having capacity of 900 KLD to concentrate and reduce quantity of BMSW, Cost around Rs700 lakhs.
- Condensate Polishing unit (CPU) having capacity of 190 m³/d, cost around Rs145 lakhs.

PART - I

Any other particulars for improving the quality of environment. Please refer **“Environmental Statement in Brief”**.



FORM - V

ENVIRONMENTAL STATEMENT FOR THE FINANCIAL YEAR ENDING THE 31ST MARCH 2021.

CO-GEN UNIT

PART - A

1. Name and address of the owner/ Occupier of the industry, operation/ process	Shri Yogesh S Patil, Executive Director M/s Athani Sugars Limited. Vishnuannanagar, P.O. Navalihal – 591 234, Tal: Athani, Dist: Belagavi.
2. Industry Category Primary- (SIC Code) Secondary (SIC Code)	: Large Scale – Red. : 2000 : 2061
3. Production Capacity – Unit	54 MW Co-generation.
4. Year of Establishment	24 MW Co-gen: Oct-2012. 54 MW Co-gen: Feb-2018.
5. Date of the last Environmental Statement Submitted	22 nd September 2021.

PART - B

WATER AND RAW MATERIAL CONSUMPTION

1 Water Consumption (m³/day):

Sr. No.	Operation	During the Previous Financial Year 2019-2020	During the current Financial Year 2020-2021
1.	Process	600	600
2.	Cooling	150	1200
3.	Domestic	Considered in sugar factory.	

(CPU recycles water used for cooling purpose)

2. Products:

Sr. No.	Name of Product	Process Water Consumption per product output (Lit / KWH)	
		During the previous financial year 2019-2020	During the Current financial year 2020- 2021
1.	Electricity	1.059	1.15

3 Raw Material Consumption:

Sr. No.	Raw Material	Product	Consumption of Raw Material Per unit of Output. (Kg /KWH of electricity)	
			2019-2020	2020-2021
1.	Bagasse used as fuel	Electricity	2.63	2.39
2.	Caustic soda		0.00045	0.00052
3.	Hydrochloric acid		0.000735	0.00086

Sr. No.	Particulars	Year 2019-2020	Year 2020-2021
1.	Total Electricity produced (KWH)	95366424	160664460

(Industry may use codes if disclosing the details of raw material would violate any contractual obligations, otherwise all the industries have to name the raw materials used.)

PART - C

POLLUTION DISCHARGED TO ENVIRONMENT PER UNIT OF OUTPUT (PARAMETER AS SPECIFIED IN THE CONSENT ISSUED)

Sr. No.	Pollutants	Quantity	Influent Concentration Kg/day	Concentration Discharged Kg/day	Percentage of Variation prescribed standard with reasons
1.	Wastewater	370	187	11.22	-
2.	Air	PM= 113.83 mg/Nm ³ , 43.36 mg/Nm ³ , 113.61mg/Nm ³ NO _x = 30.22 mg/Nm ³ , 28.83 mg/Nm ³ , 32.67mg/Nm ³ SO _x =13.19 mg/Nm ³ , 12.17 mg/Nm ³ &13.14 mg/Nm ³			No variation as per the standards prescribed by CPCB for bagasse fired boilers.
3.	Noise (db)	NA	Report enclosed.		

PART - D

HAZARDOUS WASTE

As per specified under Hazardous Waste (Management and Handling) Rules, 1989.

Sr. No.	Hazardous Waste	Total Quantity (Tonnes)	
		During the Previous Financial Year 2019-2020	During the current Financial Year 2020-2021.
1.	From process	--	--
2.	From Pollution Control Facilities	NA	NA

PART - E

SOLID WASTES

Sr. No.	Solid Waste	Total Quantity (MT)	
		During the Previous Financial Year 2019-2020	During the current Financial Year 2020-2021 (From Co-gen)
1.	From Process (by products) Boiler Ash	2804.94	5752.243
2.	Quantity recycled or reutilized within the unit.		
	1. Bagasse used in boiler as fuel.	186995.70	383482.884
	2. Boiler Ash mixed in compost and if in excess sold to bricks manufacturers.	2804.94	5752.243
	Saved : Bagasse	Nil	14349.000

PART - F

Please specify the characteristics (In terms of concentrations and quantity) of hazardous wastes as well as solid wastes and indicate disposal practice adopted for both the categories of wastes.

Hazardous waste: Not applicable

By Products (Solids): Characteristics of Boiler Ash.

Sr. No	Parameter	Unit	Boiler Ash
1	pH		8.0
2	Nitrogen	%	0.3
3	Phosphorous	%	1.0
4	Potassium	%	0.1

PART - G

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

The industry has installed ESP system for control of air pollution to 130 TPH & 145 TPH bagasse based Boilers for 24 MW & 28 MW co-gen plant & 18 TPH Coal Biogas based Boiler.

Avg. Analysis Report of Stack Monitoring during Season 2020-21

Sr. No.	Parameters	Unit	130TPH boiler	145 TPH Boiler	18 TPH boiler
1	Stack height	M	80	82	42
2	Stack diameter	M	3.0	3.0	1.8
3	Furnace type	-	Travelling grit	Travelling grit	F.B.C
4	Boiler capacity	T/hr	130	145	18
5	Fuel used	-	Bagasse	Baggase	Coal & biogas
6	Flue gas temp.	°C	128.2	134.6	120.5
7	Flue gas velocity	m / s	7.85	8.11	7.60
8	Particular Matter	mg/Nm ³	113.83	43.36	113.61
9	NO _x	mg/Nm ³	30.22	28.83	32.67
10	SO _x	mg/Nm ³	13.19	12.17	13.14
11	Hydrogen sulphide	mg/Nm ³	-	-	-

Avg. Analysis Report of Ambient Air Quality during Season 2020-2021

Sr. No	Parameters	Unit	Near main Gate	Near compost yard
1	Particular matter (PM 10)	µg/m ³	77.49	70.52
2	Particular matter (PM 2.5)	µg/m ³	29.45	28.87
3	Sulphur dioxide (SO ₂)	µg/m ³	7.39	7.10
4	Nitrogen Dioxide (NO ₂)	µg/m ³	16.06	15.97
5	Ammonia (NH ₃)	µg/m ³	7.42	7.37
6	Carbon Monoxide (CO)	mg/m ³	2.50	1.96
7	Ozone (O ₃)	µg/m ³	BDL	BDL
8	Lead (Pb)	µg/m ³	BDL	BDL
9	Arsenic (As)	ng/m ³	BDL	BDL
10	Nickel (Ni)	ng/m ³	BDL	BDL
11	Benzene (C ₆ H ₆)	µg/m ³	BDL	BDL
12	Benzo (a) Pyrene (BaP)	ng/m ³	BDL	BDL

BDL: Below Detectable limit

Avg. Analysis Report of Sound Levels during Season 2020-21

Sr. No.	Station	dB	dB
		Day	Night
1	Near main gate	61.73	60.55
2	Near guest house	61.91	60.10
3	Near cane carrier	70.23	66.73
4	Near compost yard	69.43	65.85



EMPHASIZED ASPECTS

1. Steps taken on implementation of the manufacturing process to achieve waste minimization.

- In our Distillery, we have adopted Hi-ferm continuous fermentation technology with spent wash recycle system. Here, we recycle about 20 % spent wash to fermenters for dilution of molasses instead of water. So as to minimize effluent generation. Due to Hi-ferm continuous fermentation technology we achieve 8.5% alcohol in the fermented wash also we maintain fermentation efficiency up to 90%. This results in minimum effluent generation per litre of alcohol.

In our Distillery, we have three reboilers in the distillation section. Here, alcohol-free spent wash circulates through the reboiler tube & hot vapors of alcohol from the rectifier column pass through the shell side of the same reboiler. Due to the high temperature of alcohol vapors, the water content in the spent wash is minimized. This results in concentrated spent wash & minimizes the effluent generation.

Strategies to reuse & recycle the waste.

- **a. Sugar factory:**
 - i. The effluent generated in our mill section while milling of sugar cane passes through an oil & grease trap which is installed in the ETP inlet. This oil & grease trap separates oil & grease from water & collects it in a drum. This collected used oil is sold to KSPCB authorized dealers.
 - ii. In our sugar manufacturing process after clarification of raw juice, the solid waste particles, bagacillo particles etc. come from sugar cane, these are filtered by a vacuum filter or Olivers. After filtration, residue separates as press-mud. Press-mud produced is about 4% of total cane crushed. This press-mud is used for bio-compost using conc BMSW.

b. Distillery:

- i. During separation of alcohol from the fermented wash & distillation of alcohol, the colorless effluent generated in rectifier column called as spent lees. This spent lees treated in CPU unit and treated water reused in distillery process and cooling tower.
- ii. In fermentation process, after fermentation fermented wash being feed to the conical shaped Yeast Settling Tank (YST). Here, dead yeast & sludge contains in the molasses is settle down & deyeasted/clarifier wash overflows to Clarified Wash Tank (CWT). The settled sludge is removed from the YST through screw pumps in the trolley mounted tank & sends to compost yard for mixing in the press-mud for further bio-composting process.
- iii. During season, we take water blow down of cooling towers everyday. Some quantity of this water is used for plant cleaning & remaining water is used for our own garden.
- iv. During the process of water softening, the rinse water of softener is used for our garden.

c. Co- gen:

- i. Boiler Ash sold to farmer and bricks manufacturers.

The blow down water of boiler, cooling tower & rinse water of D.M. Plant and RO rejection water treated in CPU unit and its reuse in cooling tower make up and distillery process and green belt development.

2. A. Quantity of discharge in to the environment in term of Mass/day.

a. Sugar factory:

Sr. No.	Pollutants	Quantity
1.	Wastewater	1200 m ³ /day
2.	Air	Combined with Co- gen.
3.	Noise (db)	Reports submitted.

b. Distillery:

Sr. No.	Pollutants	Quantity
1.	Wastewater	720 m ³ /day
2.	Air	Combined with Co- gen.
3.	Noise (db)	Reports submitted.

c. Co- gen:

Sr.No.	Pollutants	Quantity
1.	Wastewater	370 m ³ /day
2.	Air	PM= 113.83 mg/Nm ³ , 43.36 mg/Nm ³ , 113.61mg/Nm ³ NO _x = 30.22 mg/Nm ³ , 28.83 mg/Nm ³ , 32.67mg/Nm ³ SO _x =13.19 mg/Nm ³ , 12.17 mg/Nm ³ &13.14 mg/Nm ³
3.	Noise (db)	Reports submitted.

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

a. Sugar ETP:

The company utilized treated effluent in own mango garden and sugar cane irrigation purpose.

b. Distillery ETP:

To treat distillery spent-wash, we have two number of CSTR Bio-digesters of capacity 450 m³/day each. The generated biogas is utilized as a fuel for boiler. Biomethanated effluent is being feed to the evaporation system. The industry has adopted composting technology. After evaporation system, concentrated BMSW is spared on press mud to produce compost and evaporation condensate water treated in CPU unit and reused in distillery process and cooling tower makeup purpose. This compost is sold to our cane supplier farmers on no loss & no profit basis. The farmers are highly benefited by using this bio-compost.

c. Co-gen:

The blow-down water from boiler, cooling tower & rinse water of D.M. Plant and RO rejected water is treated in CPU unit. Treated water used in distillery process, cooling tower water make up and green belt development purpose use.

Strategies adopted during the year to improve the quality of Environment & Environment Protection.

a. Our industry has installed ESP for 130 TPH high pressure Co-gen boiler (supplied by M/s. V.T. Corporation, Mumbai) and 18 TPH Coal- Biogas based boiler (Supplied by M/s Thermax Pvt Ltd, Pune) . The stack height of 130 TPH high pressure co-gen boiler is 80 meters and 18 TPH boiler is 42 meters based on the guidelines given by the Pollution Control Board.

ESP also installed for 145 TPH baggase base new cogen plant (Supplied by M/s Thermax Pvt Ltd, Pune) stack height is 82 mtrs

Capital Cost of ESP system (130 TPH)	:	Rs. 300 lakh.
Capital Cost of New Cogen ESP (145 TPH)	:	Rs.380 lakh.
Capital Cost of Distillery ESP (18 TPH)	:	Rs 100 lakh

b. We have already commissioned two nos of CSTR –Biodigester having capacity of 450 m³/day each. The performance of this biodigester is quite statisfactory. These both biodigester are suplied and commissioned by M/s Lars Enviro Pvt Ltd, Nagpur. The generated biogas is utilized as a fuel for boiler.

Capital Cost of Bio-digester : Rs. 960 lakh.

We have installed Multi effect (07 nos) falling film eveporation system for concentrate and reduce the qutantity of biomethanated spent wash .This system is manufacture, suplied, erected and commissioning by M/s SSP Pvt Ltd.

Flow meter of MEE inlet and outlet and PTZ camera installed at Compost Yard Site & connected to CPCB server

Capital cost of Evaporator Plant: Rs. 700 lakh.

We have installed Condensate Polishing Unit (CPU) having capacity of 190m³/d to treated sugar condensate, evaporation condensate and spent lees and reject water from RO .Treated water utilized in process.

Capital cost of CPU unit is : Rs.145 Lakh

We have installed USBR anaerobic digester for expanded Sugar ETP

Capital Cost of USBR is : Rs.120 lakh.

- c.** House keeping in our industry is taken on top priority.
- d.** We have provided asphalted roads inside the factory premises to prevent formation of dust fuming.
- e.** A water sprinkling arrangement is provided near bagasse & coal handling area, so as to reduce fugitive dust emission in the factory premise.
- f.** We have planted different variety of spices like neem, pimpal , Mango, chicko, Ashoka, wind tree etc. on both sides of factory approaching road & outside our factory premise.
- g.** On the occasion of 'World Environment Day' we had planted around 1000 trees around the industries premisses and displayed the digital board of "World Environment Day" near our factory main building.



ENVIRONMENTAL STATEMENT IN BRIEF

Name of the factory : Athani Sugars Ltd.,
Vishnuannanagar P.O. Navalihal – 591 234,
Tal: Athani, Dist: Belgaum.

Units of Effluent Treatment Plant

Sugar factory:

- ❖ V Notch
- ❖ Bar Screen
- ❖ Oil & grease Trap
- ❖ Equalization tank
- ❖ Buffer Tank
- ❖ USBR Anaerobic digester
- ❖ Primary Clarifier
- ❖ Aeration Tank No.1 (Surface aeration)
- ❖ Secondary clarifier
- ❖ Aeration Tank No. 2 (surface aeration)
- ❖ Two number of tertiary Clarifier
- ❖ Chlorination tank
- ❖ 2 no of Multi grand sand filter
- ❖ Final treated Tank
- ❖ Sludge collecting tank.

Distillery:

- ❖ 5 - Days raw spent wash Storage lagoon.
- ❖ 2 nos of Bio digester (capacity 450m³/day each)
- ❖ 5 days biomethanated spent wash (BMSW) Storage lagoon .
- ❖ Multi Effect Evaporation System (7 effects)(900 KLD).
- ❖ 25 - Days Concentrated BMSW (after Evaporation).
- ❖ Bio-composting.

Co- gen:

Condensate Polishing unit have following facilities to treat water

1. Collecting Tank
2. Equalization Tank
3. Aeration tank (diffused aeration)

4. Clarifier
5. Final tank
6. Sand filter and Activated Carbon filter
7. Stored in reserved tank

Q 1. Whether untreated, treated effluents are analyzed regularly?

➤ Yes. Untreated and treated effluent samples are analyzed regularly during the season by KSPCB recognized laboratory & the report of the same is submitted to the board regularly during the season.

Q 2. Whether treated effluent is used for irrigation purpose and how much land is used for irrigation?

Yes, Sugar factory treated effluent is used for irrigation and our own garden purpose around on 54 acres of area.

Q 3. Whether stack-monitoring arrangements have been made? And if so whether monitoring is done as per consent conditions? (i.e. construction of platform at eight times the diameter of the stack from bottom and port of 10 cm. Diameter at three places at this height in the stack)

➤ Yes, Stack monitoring has been outsourced to a KSPCB recognized laboratory & the report of the same is submitted to the board regularly during the season also online monitoring system for emission installed at distillery stack and it is connected to CPCB server.

Q 4. Whether ambient air quality and sound level measurements are carried out as per the consent conditions ?

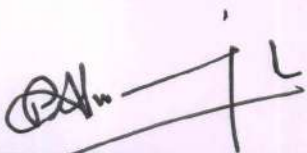
➤ Yes, all parameter of Ambient air quality and Noise level has been outsourced to a KSPCB recognized laboratory & the report of the same is submitted to the board per month regularly during the crushing season.

Q5. What is the capital investment of Pollution control measurement since inception of the plant and also mention the details of the operation & maintenance cost

- Capital Cost of Sugar ETP : Rs 250 Lakh
- USBR Anaerobic digester : Rs120 Lakh
- Capital Cost of Distillery ETP
 - a. Biodigester : Rs 960 Lakh
 - b. Composting Lakh : Rs 450
 - c. Multi Effect Evaporator :Rs 700 Lakh
 - d. Condensate Polishing Unit : Rs 145 Lakh
- Air pollution Control equipment for 130 TPH ESP : Rs 300 Lakh
- Air Pollution Control equipment for 145 TPH ESP :Rs 380 Lakh
- Air Pollution Control equipment for 18 TPH ESP Lakh : Rs. 100
- Operation and maintenance Cost for Sugar ETP/Annum : Rs 25 Lac
- Operation and maintenance Cost for Distillery ETP/Annum : Rs 35 lac

Q6. How many trees are Planted in the factory Premises?

There are around 14000 numbers of varieties trees such as Eucalyptus, Neem. Ashoka Coconut, Mango, Suru, Chikko etc are planted in our factory premises and also outside premises.



ENVIRONMENTAL OFFICER



EXECUTIVE DIRECTOR

Date: 01-09-2021

Place: Vishnuannanagar.