

# *EXECUTIVE SUMMARY*

## *Proposed 30 KLPD Molasses based distillery*

*plot.no.785/1/A,785/1/B,785/2,786/1,793,794,795,796,797  
Village- Yavat, Tal- Daund, Dist-Pune, State- Maharashtra*

# *M/S. ANURAJ SUGARS LTD*



### ***ENVIRONMENT CONSULTANT SMS ENVO CARE LIMITED***

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## 1. INTRODUCTION

**M/s. Anuraj Sugars Ltd.** is well established private sugar factory was registered under the Company Act 1956. Factory is located at Village- Yavat, Tal- Daund, Dist-Pune, State- Maharashtra the proposed plant is adjacent to own Sugar Mill, having 2500 TCD capacity having C.I.N number U 29111 PN 2003 PLC 017974 established in 23<sup>rd</sup> May 2003. The proposed 30 KLPD distillery will be executed in line with the Government's National Biofuel Policy and will directly benefit the farmers of the surrounding area to maintain their livelihood. This will assure returns to the farmers. This will help to maintain socio economy in the region.

As per EIA Notification dated 14<sup>th</sup> Sep., 2006 and its subsequent amendments; the project falls in Category B, Activity 5(g) - All molasses based distillery As per S. O. 1960(E) Dated 13<sup>th</sup> June, 2019 with screening it is necessary for M/s. Anuraj Sugars Limited (ASL) to approach State Expert Appraisal Committee (SEAC), Govt. of Maharashtra, Mumbai

## 2. LOCATION OF THE PROJECT

The proposed location is in plot no. No. 785/1/A,785/1/B,785/2,786/1,793,794,795,796,797. Village- Yavat, Tal- Daund, Dist-Pune, State- Maharashtra. Proposed site is geographically located at Latitude 18°28'12.15"N, Longitude 74°15'3.21"E and 584 meter MSL.

Company is having 64.42 acrs of land requirement for proposed industry unit is already in possession. Connectivity towards proposed site is Yavat approx. 2.02 km (North-East) road Adjacent to the factory, Yavat Railway station: Approx. 2.21 km (North), National highway no.65 approx.: 1.16 km (North-East), Pune International Airport is 38.09 km (North-West) km away project site. Land is flat with some undulating patches. Pune is nearest city approx. 41.93 km distance west direction from project site. No tree cutting will be involved. Proposed open land is with the scrubby and grassy vegetation.

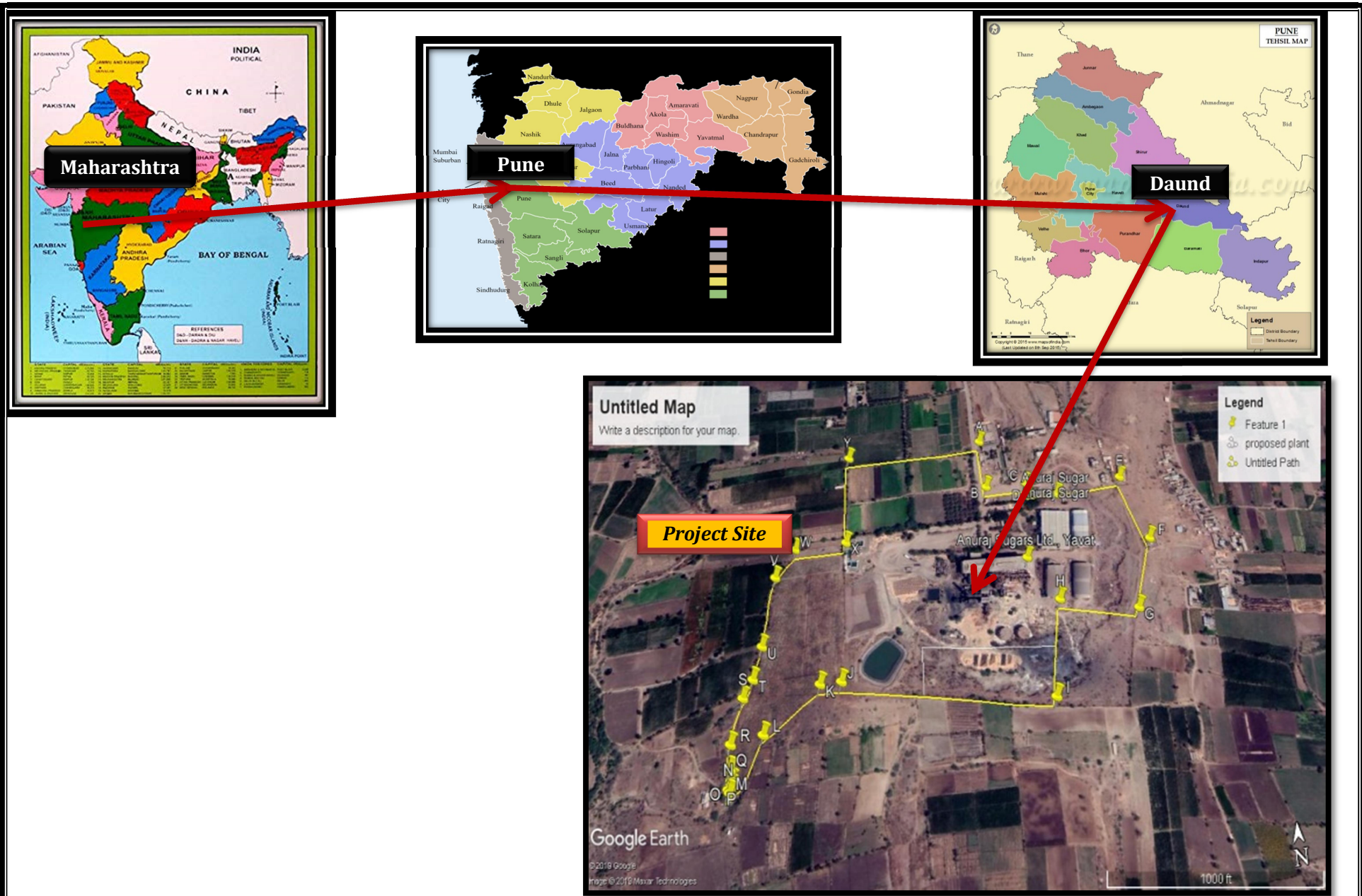


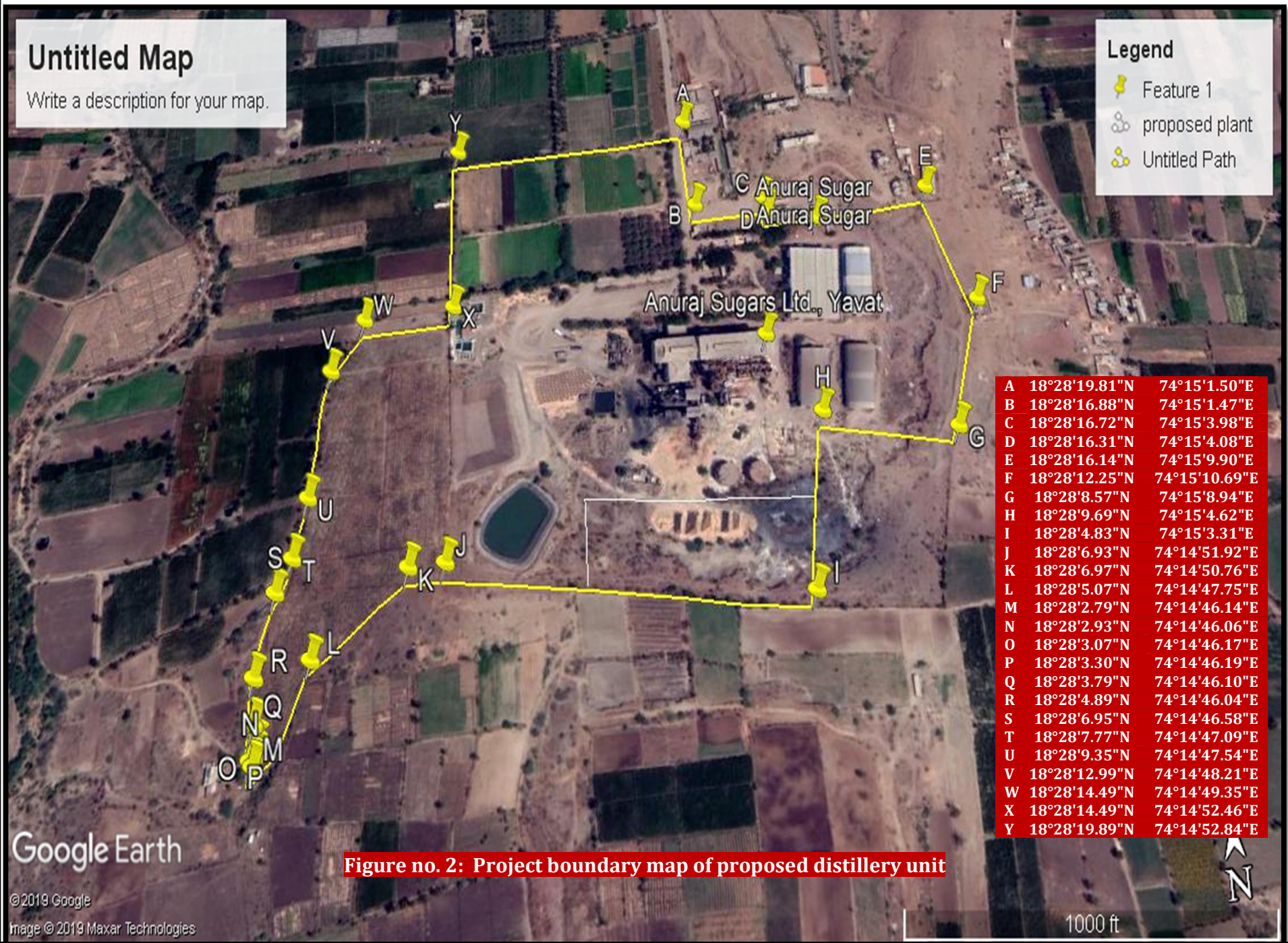
Figure no. 1: Proposed Distillery Location map

# Untitled Map

Write a description for your map.

## Legend

- Feature 1
- proposed plant
- Untitled Path



A	18°28'19.81"N	74°15'1.50"E
B	18°28'16.88"N	74°15'1.47"E
C	18°28'16.72"N	74°15'3.98"E
D	18°28'16.31"N	74°15'4.08"E
E	18°28'16.14"N	74°15'9.90"E
F	18°28'12.25"N	74°15'10.69"E
G	18°28'8.57"N	74°15'8.94"E
H	18°28'9.69"N	74°15'4.62"E
I	18°28'4.83"N	74°15'3.31"E
J	18°28'6.93"N	74°14'51.92"E
K	18°28'6.97"N	74°14'50.76"E
L	18°28'5.07"N	74°14'47.75"E
M	18°28'2.79"N	74°14'46.14"E
N	18°28'2.93"N	74°14'46.06"E
O	18°28'3.07"N	74°14'46.17"E
P	18°28'3.30"N	74°14'46.19"E
Q	18°28'3.79"N	74°14'46.10"E
R	18°28'4.89"N	74°14'46.04"E
S	18°28'6.95"N	74°14'46.58"E
T	18°28'7.77"N	74°14'47.09"E
U	18°28'9.35"N	74°14'47.54"E
V	18°28'12.99"N	74°14'48.21"E
W	18°28'14.49"N	74°14'49.35"E
X	18°28'14.49"N	74°14'52.46"E
Y	18°28'19.89"N	74°14'52.84"E

Google Earth

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Figure no. 2: Project boundary map of proposed distillery unit

1000 ft

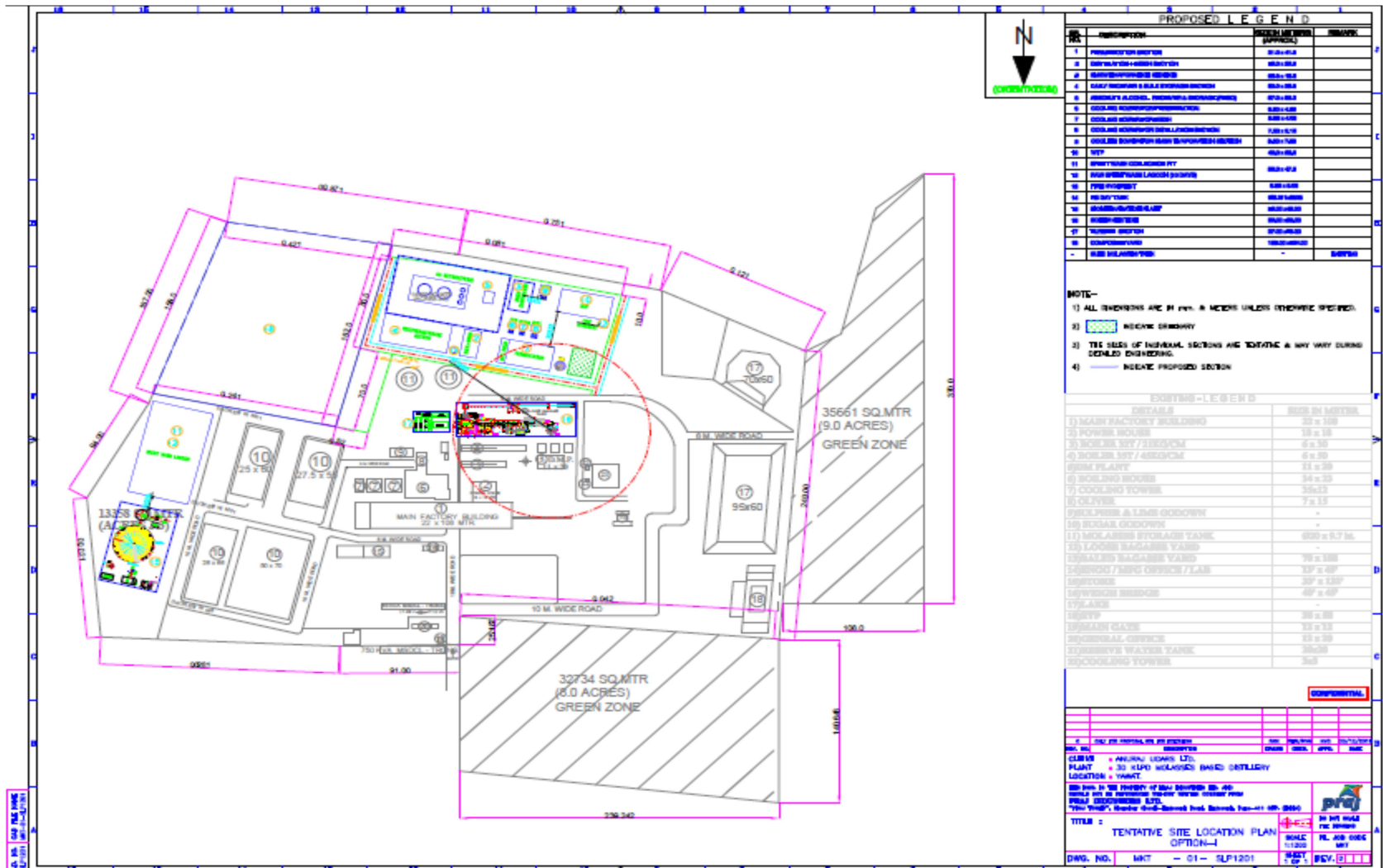


Figure no.3- Proposed Distillery plant layout

### 3. PROJECT INFORMATION IN BRIEF

Brief information of the project is given in Table 1.

**Table no. 1: Project Information in brief**

Sr.No	Particulars	Details
1.	<b>Nature and Size of the Project</b>	Proposed 30 KLPD molasses based distillery
2.	<b>Location Details</b>	
	Gat No	785/1/A,785/1/B,785/2,786/1,793,794,795,796,797
	Village	Yavat
	Taluka	Daund
	District	Pune
	State	Maharashtra
	Latitude and Longitude	Latitude : 18°28'12.15"N Longitude 74°15'3.21"E MSL: 584 meter
	Toposheet No.	47 J/02, 47 J/03, 47 J/06, 47 J/07, of Survey of India
3.	<b>Area details</b>	
	Total land Area	64.42 Acrs
	Total Sugar and Proposed distillery	24.5 Acrs
	Total green belt area	21.25 Acrs (32.98%)
4.	<b>Environmental Setting Details (with approximate aerial distance and direction from the project site)</b>	
	Nearest major settlement	Yavat approx. 2.02 km (North-East)
	Nearest Village	Daund approx. 35.55km( East)
	Nearest City	Pune is nearest city approx. 41.93 km distance west direction
	Nearest Highway	National highway no.65 approx.: 1.16 km (North-East)
	Nearest Railway Station	Yavat Railway station: Approx. 2.21 km (North)
	Nearest Airport	Pune International Airport is 38.09 km (North-West) km away project site
	National Parks/ Wild Life Sanctuaries/BiosphereReserves/RF and PF within 10 km radius	There is no National Parks/ Wild Life Sanctuaries/ Biosphere Reserves/ RF and PF within 10 km radius area project site
	Nearest Water Bodies	Mula-Mutha River :Approx .8.74 km distance (North-West direction) Bhima river channel : Approx. 1.67 km distance (North-East direction) Khamgaov Talav: Approx: 5.54 km distance (North-West direction) Matoba Talav: Approx: 6.88 km distance (North-East direction)
	Seismic Zone	Seismic Zone - III as per IS: 1893 (Part-I): 2002
5.	<b>Cost Details</b>	
	Project Cost	40.96 Cr.
	Cost for Environmental Management Plan (Budget)	375.5 lakhs
	Cost towards CER Activities	82.4 lakhs
6.	<b>Basic Requirements of the Project</b>	

	Fresh Water	260 CMD (Khadakwasla Irrigation department, Pune. 16th July, 2019)
	Fuel	Bagasse
	Fuel Consumption	131 MT/Day (270 days: required bagasse : 35,370 MT/A
	Biogas	12150 m3/day
	Steam generated with coal and biogas	8.37 Ton/hrs
	Power requirement	1.2 MW/hrs
	Manpower required	100 nos. skilled and unskilled
	Proposed Boiler capacity	15 TPH
<b>7.</b>	<b>Product and By-Product details (Existing sugar factory unit)</b>	
	Sugar	300 MT/day
	By-Product	
	Molasses	105 MT/day
	Bagasse	750 MT/day
	Press Mud	105 MT/day
<b>8.</b>	<b>Product and By-Product details (Proposed distillery unit)</b>	
	Extra Neutral Alcohol	30 KLPD
	Rectified Spirit	
	Absolute Alcohol	
	<b>By-product name</b>	
	Biogas	12150 m3/day
	Bio-compost/fertilizer	14 MT/day

### 3.1 Resource requirement

The detail raw material required for distillery operation listed below in Table 2.

**Table no. 2: Raw material requirement (Distillery unit)**

Sr.No	Name of the raw material	Quantity	Storage	Transportation
1.	Molasses			
2.	B-Heavy Molasses	92 T/day	Storage tank	Tanker
3.	C-Heavy Molasses	115 T/day	Storage tank	Tanker
4.	Antifoaming Agent (Silicon based )	As per req.	Plastic carry bag	Trucks/tempo
5.	Sulphuric Acid	As per req.	Plastic carry bag	Trucks/tempo
6.	Urea (46% N2)	As per req	Plastic carry bag	Trucks/tempo
7.	CIP Chemicals for Fermentation	As per req	Plastic carry bag	Trucks/tempo
8.	Diammonium Phosphate	As per req	Plastic carry bag	Trucks/tempo
9.	Magnesium Sulphate	As per req	Plastic carry bag	Trucks/tempo
10.	Chemicals For Bio Gas Plant	As per req	Plastic carry bag	Trucks/tempo
11.	Nitric Acid (67 % v/v solution)	As per req	Plastic carry bag	Trucks/tempo
12.	Caustic (47% v/v solution)	As per req	Plastic carry bag	Trucks/tempo
13.	Coagulant Flocculent	As per req	Plastic carry bag	Trucks/tempo
14.	Sanitizing Agent	As per req	Plastic carry bag	Trucks/tempo

### 3.2 Water requirement and its quantification

Water requirement are given below the table

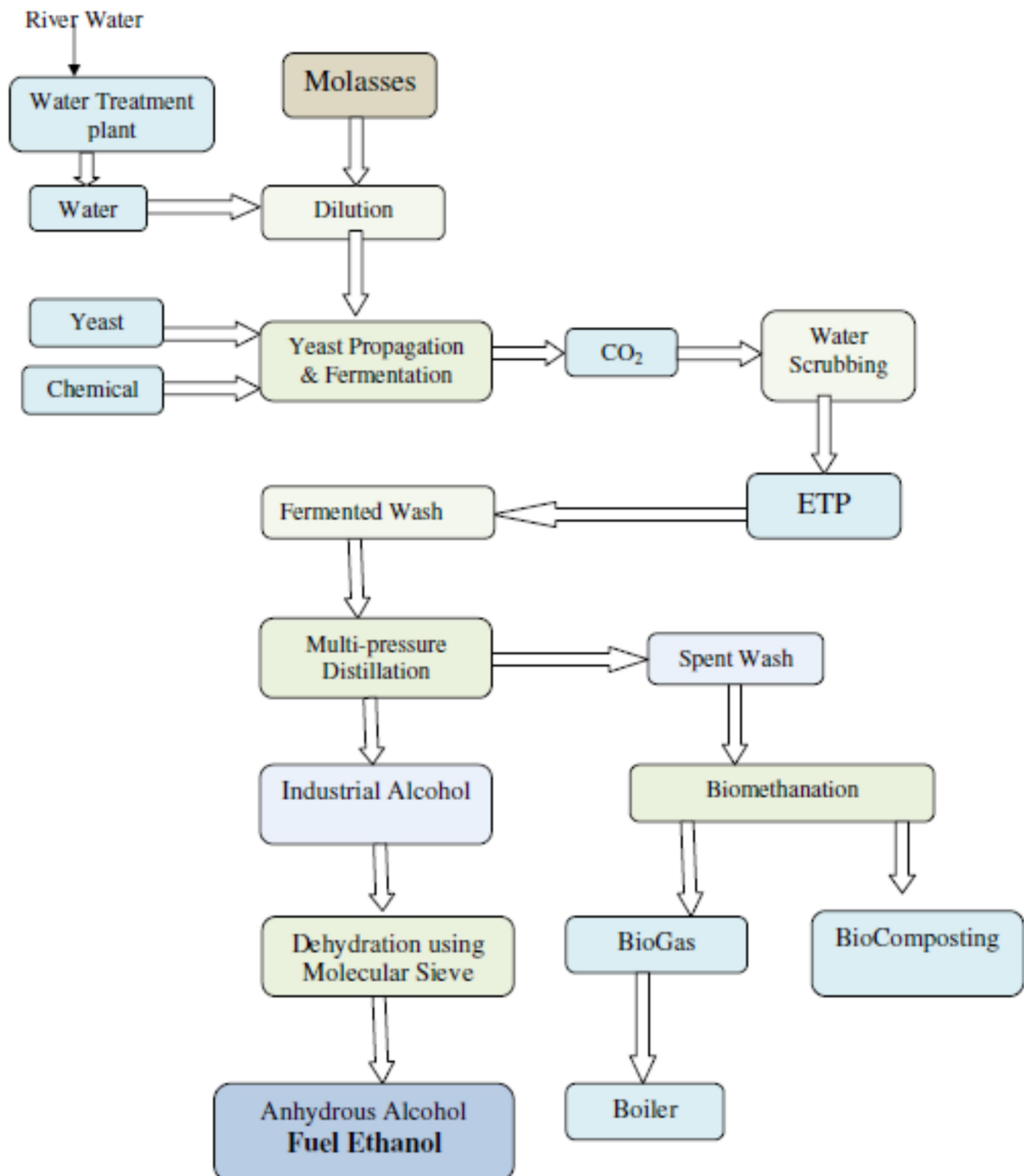
**Table no. 3: Water and wastewater balance for distillery**

<b>WATER INPUTS</b>	
Process Water for Fermentation section and CO <sub>2</sub> scrubber	90
DM Water For RS Dilution + Bolier	100
Soft Water For Vacuum Pump & Others	nil
Soft Water Makeup For Cooling Towers	50
Other Domestic Usage, laboratory uses	20
<b><i>Total Water Input at start-up</i></b>	<b>260</b>
<b>WATER OUTPUT</b>	
Fermentation Dilution	245
CT Evaporation & Drift Losses	115
DM Water For RS Dilution + Bolier	252
Domestic Consumption	20
Water In Spent Wash (17 % solids)	Nil
Pump Sealing / Purge	<b>Nil</b>
<b><i>Total Water Output</i></b>	<b>632</b>
<b>RECYCLE STREAMS</b>	
Fermentation Dilution	<b>155</b>
Soft Water Makeup For Cooling Towers	65
DM Water For RS Dilution + Bolier	152
Pumps Sealing Water Recycle	Nil
<b><i>Total Recycling /Re-utilisations of water per day</i></b>	<b>372</b>
<b>Total Daily Fresh Water Input</b>	<b>260</b>



## 4. PROCESS DESCRIPTION

**Process Flow-Chart**



## 5. BASELINE ENVIRONMENTAL SETTINGS

Table no. 4: Environmental setting

Sr.No.	Aspects	Description		
1.	Project Location	Plot no. 785/1/A,785/1/B,785/2,786/1,793,794,795,796,797. Village- Yavat, Tal- Daund, Dist-Pune, State- Maharashtra.		
2.	Geographical Coordinates	Latitude : 18°28'12.15"N Longitude 74°15'3.21"E MSL: 584 meter		
3.	Toposheet number	47 J/02, 47 J/03, 47 J/06, 47 J/07, of Survey of India		
4.	Nearest Village	Yavat approx. 2.02 km (North-East)		
5.	Nearest airport	Pune International Airport is 38.09 km (North-West) km away project site		
6.	No. of Villages in 10 Km Study area	30-35 villages in 10.0 km area		
7.	Precipitation	Annual average precipitation of 803 mm		
8.	Temperature	Maximum temperature is about 32.5 °C Minimum temperature is about 13.1 °C Average temperature level of 24.39 °C		
9.	Humidity	Maximum relative humidity are 99.9 % Minimum relative humidity are 33.6 % Average humidity level of 81.98 %.		
10.	Wind Direction	East		
11.	Soil Type	Shallow to very deep black soils, red loamy soils,		
12.	Ambient Air Quality	8 Locations 24 hourly samples Twice a week for 3 months (in µg/m3)	Avg. PM10	47.5 to 57.3 µg/m3
			Avg. PM2.5	27.1 to 34.9 µg/m3
			Avg. SO2	6.3 to 11.0 µg/m3
			Avg. NOx	11.3 to 17.8 µg/m3
13.	Water Quality (Ground & Surface)	Once in season at 10 locations (Physical, chemical and biological parameters)	Colour	A review of the above chemical analysis reveals that water from all sources remains suitable for drinking purposes after disinfection due to presence of Total coliform in all the surface water samples collected and rests all heavy metals constituents the limits prescribed for drinking water standards promulgated by Indian Standards (10500:
			pH	
			TDS	
			COD	
			E-Coli	

				2012). In ground water sample pH is at alkaline side ranging from 7.24 to 7.8. Total Hardness ranges from 300 to 850 mg/l which is higher than desirable limits prescribed for drinking water standards. Rests all heavy metals constituents are within the limits prescribed for drinking water standards promulgated by Indian Standards (10500: 2012).
14.	Soil Quality	Once in season at 7 Locations	pH, NPK	pH is ranging from 7.54 to 8.02 which show soil is neutral to Slightly alkaline in nature. Total Kjeldhal nitrogen value is ranging from 11.02 to 87.73 mg/kg. Calcium value is ranging from 216.37 to 480.96 mg/kg. Conductivity value is ranging from 104.6 to 656 µhos/cm. Heavy metal like Lead, Total Chromium, Cadmium are absent in all soil sample. Soil is good for agricultural field.
15.	Noise Quality	Once in season at 8 Locations (Noise levels in dB(A))	Average Day	38.7 to 54.7 dB (A)
			Average Night	31.6 to 44.7 dB (A).
16.	Nearest Water body	Mula-Mutha River : Approx .8.74 km distance (North-West direction) Bhima river channel : Approx. 1.67 km distance (North-East direction) Khamgaov Talav: Approx: 5.54 km distance (North-West direction) Matoba Talav: Approx: 6.88 km distance (North-East direction)		
17.	Nearest Village	Yavat approx. 2.02 km distance (North-East direction)		
18.	Nearest Railway station	Yavat Railway station: Approx. 2.21 km distance (North direction)		
19.	Nearest Highway	National highway no.65 approx.: 1.16 km distance (North-East direction)		
20.	Eco-sensitive area	No		
21.	Nearest IMD station	At Pune 40.05 km in NW (Station ID- 43063)		

## 6. ANTICIPATED ENVIRONMENTAL IMPACTS

Table no. 5: Anticipated environmental impacts

Sr.No	Environmental Facets	Anticipated Impacts
1.	Air Environment	Probable increase in concentration of air pollutants due to process, fugitive and utility emissions.
2.	Water Environment	Generation of industrial & domestic wastewater.
3.	Land Environment	Impacts on land due to improper disposal of hazardous/soild waste.
4.	Ecological Environment	Positive as greenbelt of appropriate width will be developed and maintained by the company in the area. No impacts are envisaged on aquatic flora & fauna as there will be zero effluent discharge outside the plant premises.
5.	Social Environment	Overall development of the area in respect of the infrastructure development, educational growth, health facilities etc.
6.	Economic Environment	Positive impacts on economy of the region and the country as the Alcohol will be exported and revenue generation.
7.	Noise Environment	Minor increase in noise level within the project area.
8.	Occupational Health & Safety	Major health hazards are identified in worst case scenario.

## 7. ADDITIONAL STUDIES

The following Additional Studies were done in reference to the awarded **ToR points issued by SEAC, Maharashtra MOM 169<sup>th</sup> meeting of SEAC-I issued on dated 10<sup>th</sup> October, 2019 & SEIAA, Maharashtra MOM 183<sup>rd</sup> meeting issued on dated 13<sup>th</sup> December,2019** for the proposed project

- ❖ Risk Assessment for storage and handling of alcohol and mitigation measure due to fire and explosion and handling areas

## 8. ENVIRONMENT MANAGEMENT PLAN

### 8.1 Air pollution Management

- ❖ Air pollution during construction phase will be due to material handling, dust emission, vehicular movement and emission from machinery. Air emissions/pollution during operation phase will be mainly form flue gases, manufacturing process, material & Ash handling and from vehicular movement.
- ❖ Necessary preventive measures shall be taken during construction phase so that the ambient air quality will conform to National Ambient Air Quality standards.

- ❖ To avoid the generation of dust emission water sprinklers will be provided to suppress the dust.
- ❖ Wet Scrubber will be provided to the proposed stack of 35 m height to control the particulate matter emission into the air as main pollution control measures. This boiler shall run on bagasse.
- ❖ Water sprinkler will be provided at coal stack pit and ash disposal area to control fugitive emission.
- ❖ Work zone area including internal roads in the plant will be asphalted or concreted. Water spraying system will be installed for regular spraying of water on road and work zone to minimizing fugitive dust emission.
- ❖ Vehicular pollution shall be undertaken by use of vehicles with PUC Certificates and regular maintenance of vehicles/machineries.
- ❖ The CO<sub>2</sub>, which is liberated, is scrubbed in water, with the help of CO<sub>2</sub> Scrubber. This CO<sub>2</sub> contains ethanol, which is recovered by collecting CO<sub>2</sub> Scrubber water into Sludge Trough. The diluted sludge is pumped into Sludge Settling clarifier. The traces of ethanol present in diluted sludge are separated at the supernatant, which is collected into BWT through overflow, and washed sludge from bottom is drained off.

## **8.2 Noise pollution management**

- ❖ Construction work will be carried out during day time only
- ❖ The workers working near Noise production machineries will be provided with ear plugs
- ❖ Construction equipment and vehicles will be maintained in good running condition
- ❖ Noise producing machinery will be placed in acoustic enclosures/acoustic rooms to reduce the noise levels
- ❖ Workers working near noisy area shall be provided with ear plugs
- ❖ Roads will be maintained in good condition to reduce the noise due to traffic
- ❖ Green Belt will be developed in and around the project site

## **8.3 Waste water management**

- ❖ Spent wash generated during the process of distillation will be treated in Biomethanation followed by bio-composting.
- ❖ The condensate generated during the process of Evaporators will be reused in the process consequently decreasing the net water requirement.

- ❖ Spent lees will be recycled in the process again.
- ❖ Blower blow down will be send the cooling tower make up water,
- ❖ Cooling tower blow down will be used for irrigation purpose.

#### 8.4 Land Environment/Solid hazardous waste management

- ❖ Yeast sludge mixed with ETP sludge used as manure.
- ❖ Ash generated will be given to brick manufacturers.

**Table no. 6: Quantification of Solid Waste**

Sr.No	Type of waste	Quantity	Treatment & Disposal
1.	Press mud	105 MT/M	Press mud will be sold to the farmer as manure.
2.	Yeast sludge	0.025 TPD	Sludge will be dried in natural heat of sunlight. The dried cakes will be scrapped off periodically and can be utilized for as manure.
3.	ETP sludge	4 MT/M	ETP Sludge used as Manure
4.	Ash	Bagasse ash: 30 MT/M	Bagasse ash sale to brick manufacturer or compost filler material.
5.	Domestic	Negligible	Local waste collection system
6.	Spent oil	200 Lit/M	Mixed with bagasse & used as a fuel to boiler

#### 8.6 Odor Management

Anticipated odor generation sources will be molasses, fermentation unit, spent wash, septic tank, and Yeast storage and bio-methanation process. Following control measures shall be implemented to avoid the odor in the atmosphere:

- ❖ Better house-keeping
- ❖ Whole process is work under closed conditions, close pipeline.
- ❖ Spent wash from evaporation would be in a closed tank and directly send to the bio-composting.
- ❖ Bio-methanation will be adopted.
- ❖ Fermentation unit will be provided with proper cover to avoid the spread of odor and regular steaming of all fermentation equipment's; temperature will be kept under control during fermentation to avoid inactivation/killing of yeast; staling of fermented wash would also be avoided.
- ❖ Regular use of bleaching powder in the drains to avoid generation of putrefying micro-organisms.
- ❖ Yeast sludge will be dry in drying beds and used as manure.
- ❖ Steaming of major pipelines

- ❖ Proper operating condition will be maintained.
- ❖ Proper cleaning of drains.
- ❖ Well planned Greenbelt will be developed in and around the plant premises to suppress the odor.

### **8.7 Biological Environment Management**

- ❖ Greenbelt area will be developed in & around the plant premises and shall be maintained properly.
- ❖ There is no any discharge from the project activities. No any impact on the biological environment has been found any alteration or destruction to the biological environment.
- ❖ All efforts will be put-up by the factory management to maintain the ecological balance and improve the environment in terms of ecology and green Belt development. Industry will follow the zero discharge norms. Hence no adverse impacts on surrounding ecology.

### **8.8 Greenbelt Development**

Greenbelt will be developed as per CPCB guidelines. M/s. Anuraj Sugars Limited proposes to develop a green belt in 21.25 Acrs (64.45 Acrs of total land). Details of trees and shrubs to be planted as per the CPCB guideline. Local and native trees will preferably plant. Broad leaves trees will be planted around the industrial area. Avenue plantation will be done along the road sides.

### **8.9 Occupational Health**

- ❖ All safety signs will be placed at proper location.
- ❖ First aid kits will be made available at every department
- ❖ Pre-employment Medical checkup and periodical medical checkup shall be undertaken to know the occupational health hazards at the early stage.
- ❖ Work permit system will be introduced to avoid the entry or un-authorized working to avoid the incidences which can lead to the accident if proper care is not taken.
- ❖ All arrangement required for Fire hydrant system shall made at every vulnerable location to have the firefighting facility.
- ❖ Apart from above, all required Fire Extinguishers shall be provided at appropriate locations
- ❖ All staff and workers will be trained in firefighting operations and emergency preparedness plan or to tackle the accident

❖ Apart from all engineering control measures, if required necessary PPEs shall be provided as last protection measures to the employees.

Good housekeeping also plays important role in avoiding the undesirable incidences / accidents, hence good housekeeping practices will be employed throughout the Factory premises.

## 9. ENVIRONMENTAL MONITORING PROGRAMS

**Table no. 7: Environmental monitoring schedule**

Sr.No.	Particulate	Parameters	Number of location	Frequency
1.	Ambient air quality	PM <sub>10</sub> , PM <sub>2.5</sub> , SO <sub>2</sub> , NO <sub>x</sub> , CO, etc.	Ambient air quality at minimum 3-5 locations. 1 location within the plant premises, 1 location in upwind, 1 location in downwind direction and 1 location in cross wind direction.	Monthly
2.	Stack gas	PM, SO <sub>2</sub> and NO <sub>x</sub>	Number of stacks	Monthly
3.	Work place	PM <sub>2.5</sub> , SO <sub>2</sub> , NO <sub>x</sub> , CO, O <sub>3</sub>	Process emission in workplace area/plants (for each area/plant minimum 2 locations and 1 location outside plant area near vent)	Monthly
4.	Waste water	pH, EC, SS, TDS, O&G, Ammonical Nitrogen, COD, BOD, Chloride, Sulphides etc.	Wastewater from all sources. Inlet & outlet of ETP, Condensate treatment plant	Monthly
5.	Surface water and ground water	pH, Salinity, Conductivity, TDS, Turbidity, DO, BOD, Phosphate, Nitrates, Sulphates, Chlorides, Total Coliforms (TC) & <i>E.Coli</i>	3-5 location Ground as well as Surface water	Half yearly
6.	Solid waste	Ash	➤ Process dust generated sludge and ash. ➤ Before used as manure if used manure	Monthly
7.	Noise	Equivalent noise level - dB (A) at min. Noise Levels measurement at high noise generating places as well as sensitive receptors in the vicinity	8 location At all source and outside the Plant area.	Monthly
8.	Green belt	Number of plantation (units), number of survived plants/ trees, number of	In and around the plant site	Monthly



Sr.No.	Particulate	Parameters	Number of location	Frequency
		poor plant/ trees.		
9.	Soil	Texture, pH, electrical conductivity, cation exchange capacity, alkali metals, Sodium Absorption Ratio (SAR), permeability, porosity.	2-3 near Solid/ hazardous waste storage. At least five locations from Greenbelt and area where manure of biological waste is applied. Near spent wash storage lagoon	Quarterly
10.	Occupational health	Health and fitness checkup of employees getting exposed to various hazards and all other staff	All worker	Yearly/ twice a year

## 10. ENVIRONMENT MANAGEMENT COST

**Table no. 8: Environment Management Cost (Construction phase)**

Sr. No	Description	Capital Cost (Rs. in lakhs)	Recurring Cost (Rs. in lakhs)
1.	Air Pollution Control	39.5	5.00
2.	Water Pollution Control	103.35	5.00
3.	Solid waste Management	200.00	3.00
4.	Environmental Monitoring and Management	12.65	1.5
5.	Rainwater Harvesting	5.0	1.0
6.	Occupational Health	10.00	1.0
7.	Green belt development	5.00	1.5
	Total	375.5	18.0

**Table no. 9: Environment Management Cost (Operation phase)**

Sr. No	Description	Capital Cost (Rs. in lakhs)	Recurring Cost (Rs. in lakhs)
1.	Air Pollution Control	5.0	5.0
2.	Water Pollution Control	3.0	10.0
3.	Solid waste Management	10.0	5.0
4.	Environmental Monitoring and Management	3.0	2.0
5.	Rainwater Harvesting	15.0	3.0
6.	Occupational Health	10.0	3.0
7.	Green belt development	5.0	1.5
	Total	51.0	29.5

## 11. PROJECT BENEFITS

### 11. PROJECT BENEFITS

- ❖ The industry will be established in the rural region of the state.
- ❖ The industry will provide skilled, semi-skilled, unskilled people, direct and indirect employment to more than 70-100 local rural persons.
- ❖ It can be stated that by this activity employment potential is certainly increasing in all walks of life – skilled, semi-skilled and unskilled.
- ❖ The importance and utility of alcohol is well known as an industrial raw material for manufacture of a variety of organic chemicals including pharmaceuticals, cosmetics, polymers etc.
- ❖ Alcohol is a potential fuel when blended with petrol. In the presence of ethanol, petrol burns with more efficiency and low toxic smoke.
- ❖ Alcohol is an eco-friendly product and is a substitute to the imported petroleum.
- ❖ As sugar cane cultivation is enhanced in the country, the production of molasses from the sugar industry has greatly increased.

## 12. CONCLUSION

- ❖ Proposed project does not attract rehabilitation and resettlement of people
- ❖ Proposed project does not anticipate any adverse impacts on environment.
- ❖ Production process is environmentally safe as Zero Liquid Discharge is proposed with efficient mitigation measures implemented.
- ❖ Air emissions through stack will be controlled by Wet Scrubber.
- ❖ Loss of vegetation and habitat will not be attributed.
- ❖ Workplace/ operation hazards, which will be minimized by providing personal protective equipment's, safety precautions, emergency plan & disaster management plan. Consequently, impacts on air, water, land and ecological environments are insignificant and the socio-economic benefits are predominantly positive.

Thus, overall project features, process, potential of pollution, pollution prevention measures and environmental management plan proposed by proponent illustrates that proposed project will not have any considerable impacts on environment as well as on socio-economic & ecological conditions of the project area. Therefore, proposed project is environmentally safe.