

Executive Summary For M/s. Utech Sugar Ltd.  
Village : Kavthe Malkapur, Tal : Sangamner, Dist : Ahmednagar

## **EXECUTIVE SUMMARY**

**For**

**Proposed Expansion of Sugar capacity from 3800 TCD to 5000  
TCD, Cogen Power Plant from 14 MW to 18 MW and New  
distillery 30 KLPD capacity**

**By**

**M/s. Utech Sugar Limited  
Gat No.10, 11/1, 11/2, 15/3(Part),  
Village Kavthe Malkapur, Tal : Sangamner,  
Dist : Ahmednagar, State : Maharashtra**



Executive Summary For M/s. Utech Sugar Ltd.  
Village : Kavthe Malkapur, Tal : Sangamner, Dist : Ahmednagar

### INDEX

<b>Sr.no.</b>	<b>Particular</b>	<b>Page No</b>
1.0	Introduction	1
2.0	Promoter's Background & Profile	2
2.1	Need of project and its importance to the country and region	2
3.0	Brief description of the Project	3
3.1	Land And site Development	6
3.2	Employment Potential	6
4.0	Raw Material and its Sustainability	7
4.1	Manufacturing Process	9
4.2	Production details	12
4.3	Water Requirement	13
4.4	Power Requirement	13
4.5	Soil Classification	13
5.0	Wastewater Management	13
5.1	Air pollution management	15
5.2	Solid waste generation and management	15
6.0	Rehabilitation and Resettlement	16
7.0	Cost of the project	16



Executive Summary For M/s. Utech Sugar Ltd.  
Village : Kavthe Malkapur, Tal : Sangamner, Dist : Ahmednagar

### **1.0 Introduction:**

M/s Utech Sugar Ltd. (USL) has set up 3800 TCD sugar and 14 MW cogen power plant at Gat No.10, 11/1, 11/2, 15/3(Part), Kavathe Malkapur, Tal. Sangamner, Dist. Ahmednagar.

USL has undertaken 1st trial crushing season in 2017-18 and crushed about 3.01 lakh MT of cane and produced 3.32 lakh MT of sugar with an average recovery of 11.04% on cane. USL has exported surplus power of 1.58 Million Units to MSEDCL.

USL is now planning to increase the cane crushing capacity from present 3800 TCD to 5000 TCD (net addition of 1200 TCD). The company also proposes to increase its cogen power capacity from existing 14 MW to 18 MW for export of surplus power to grid and set up 30 KLPD Ethanol plant.

USL decided to go for the expansion for the above-mentioned capacities along with ethanol plant considering the existing sugarcane availability and future potential for sugarcane cultivation in the area of operation in the coming years due to excellent rainfall.

The integrated project comprises of a sugar mill for the manufacture of high quality sugar, thereby making available bagasse that is required for the cogen power plant operation and molasses for producing ethanol. The area of operation for the sugar mill has good rainfall of about 474 mm. This gives huge availability and potential for sustained sugarcane supply to the sugar mill and thereby making sustained supply of bagasse and molasses for cogen power and ethanol plant respectively.

USL already has 45.81 acres land in possession for the sugar factory and is sufficient for the proposed expansion project. The water required is made available from the back water of Mula Dam which has huge amount of water for supply of required water throughout year for operation of the proposed project. The company has already lifted water from Mula River and constructed water supply scheme of 7 Km.

The surplus power from cogen plant is evacuated to 220 kV MSETCL Electrical Sub-station through LILO arrangement at Darewadi about 5 Km from site.

The aggregate fund requirement for the integrated expansion project has been estimated at Rs.8630.00 lakh.

Executive Summary For M/s. Utech Sugar Ltd.  
Village : Kavthe Malkapur, Tal : Sangamner, Dist : Ahmednagar

## **2.0 Promoter's Background & Profile:-**

Mr. Ravindra Purshottam Birole, age 50 is the chief promoter and the Managing Director of USL. He passed D.M.E in the year 1987. He started Utech Engineering Consultancy Services and in 1991 Utech Engineering Works (I) Pvt. Ltd. was established to provide services in the field of Design, Manufacturer, supply, erection & commissioning of Mill House, Boiling House, Sugar refineries, Material handling on Turnkey basis.

Utech also entered into the field of supply of equipment for distillery manufacturing rectified spirit and fuel grade ethanol manufacturing form rectified spirit.

Mr. Birole started with another company named "Rama Agro Foods Pvt. Ltd." which undertakes activities of procuring, processing and marketing the good quality agricultural processed food products in domestic and International market to Customer Satisfaction.

The suitability of the soil, increased irrigation facilities and previous experience of the farmers in cane growing will be helpful in developing the required area for cane plantation

## **2.1 Need of project and its importance to the country and region**

India is one of the largest producers of sugarcane as well as sugar in the world. The sugarcane is a cash crop for farmers. There are about 564 installed sugar factories in India. Most of the sugar industries are located in rural areas providing employment to rural masses. Sugar factories from Maharashtra are the backbone of rural economy. These factories have contributed for the development of economy as well as infrastructure in rural areas, generated ample of employment opportunity to local people. The project proponent is one of a private sugar factory from the region of Maharashtra. The cultivation of sugarcane is increasing every year in the command area of the factory and it is anticipated to grow gradually for next few seasons. In addition, the sugar factory is having plans to promote and support the cane development programme, in its command area.

**2.1.1 Demands-Supply Gap:** The project is envisaged to meet the demand supply gap in both domestic and export market demand is increasing day by day. The policy of Central Government is to increase percentage of ethanol blending with petrol from the present 10% to 20% by the year 2017. Therefore, it is important to all distilleries in the country to increase its ethanol production to meet the demand & supply.

Executive Summary For M/s. Utech Sugar Ltd.  
Village : Kavthe Malkapur, Tal : Sangamner, Dist : Ahmednagar

### 3.0 Description of the Project

The proposed scheme envisages for enhancing the sugarcane crushing capacity by addition of 1200 TCD to its 3800 TCD sugar plant (total capacity of 5000 TCD) considering the huge potential raw material available from the nearby villages of USL.

This expansion program shall be met by addition of equipments in milling and boiling house sections and necessary modifications in cogen power plant.

The company also proposes to set up 30 KLPD ethanol plant along with captive cogen power plant. The spent wash generated will be mixed with press mud and sold to the farmers which will help in achieving zero discharge. The power requirements of the distillery unit shall be met from the separate captive cogen power plant of 2 MW.

### 3.1 Project Synopsis

Sr.no.	Description	Details
1	Name of the Company & Address	M/s Utech Sugar Ltd. 2055, Sadashiv Peth, Anant Residency, Tilak Road, Near Girija Hotel, Pune-411030
2	Factory Site	At Gat no. 10, 11/1, 11/2, 15/3 (Part) Kavathe Malkapur, Tal. Sangamner, Dist. Ahmednagar, Maharashtra
3	Constitution & Type	Limited Company
4	Latlong	19° 22' 51.30" N, 74° 20' 33.56" E
5	Elevation	630 meter
6	Products & By Products	1. Sugar 2. Cogeneration power 3. Ethanol
7	Existing Capacity of the Project	Sugar Plant: 3800 TCD Cogen Power Plant (14 MW: DEC type)
8	Proposed Expansion Capacities of the Project	Sugar Plant: 1200 TCD Total installed capacity: 5000 TCD Cogen Power : 4 MW

Executive Summary For M/s. Utech Sugar Ltd.

Village : Kavthe Malkapur, Tal : Sangamner, Dist : Ahmednagar

		Total installed capacity: 18 MW Ethanol Plant : 30 KLPD
9	Commercial Operation Date- (C.O.D)	October, 2019
10	Working Days	160 days of sugar plant 160 days of cogen plant (Season) 66 days of cogen plant (Off-Season) 270 days of ethanol plant
11	Basic Raw material requirement per annum	8.00 lakh MT of Sugarcane
12	Bagasse, Molasses & Press mud Available from sugarcane crushing	Bagasse - 220000 MT per Annum Molasses - 34000 MT/Annum Press mud - 34000 MT / Annum
13	Steam requirement per hour	86.36 MT for sugar process, 8.00 MT for Ethanol process
14	Power Generation per hour (Export)-Season	17860 kW (10470 kW export) Generation @ Steam to Power Ratio of 5.60 kg/kWh)
15	Power Captive use per hour	5786 kW for sugar & colony, 800 kW for ethanol, 1610 kW for Cogen Auxiliaries
16	Power Generation per hour (Export)-Off- season	18000 kW (15950 kW) (Generation @ Steam to Power Ratio of 4.20 kg/kWh)
17	Power Captive use per hour	250 kW for sugar & colony, 800 kW for ethanol, 1800 kW for Cogen Auxiliaries
18	Water requirement per day (Incremental capacity)	500 m <sup>3</sup> /day for sugar 120 m <sup>3</sup> /day for cogen 150 m <sup>3</sup> /day for ethanol
19	Purchase cost of Sugarcane	Rs 3000 per MT
20	Selling price of Sugar	Rs 30,000 per MT
21	Power Tariff	6.27 Rs/kWh



Executive Summary For M/s. Utech Sugar Ltd.

Village : Kavthe Malkapur, Tal : Sangamner, Dist : Ahmednagar

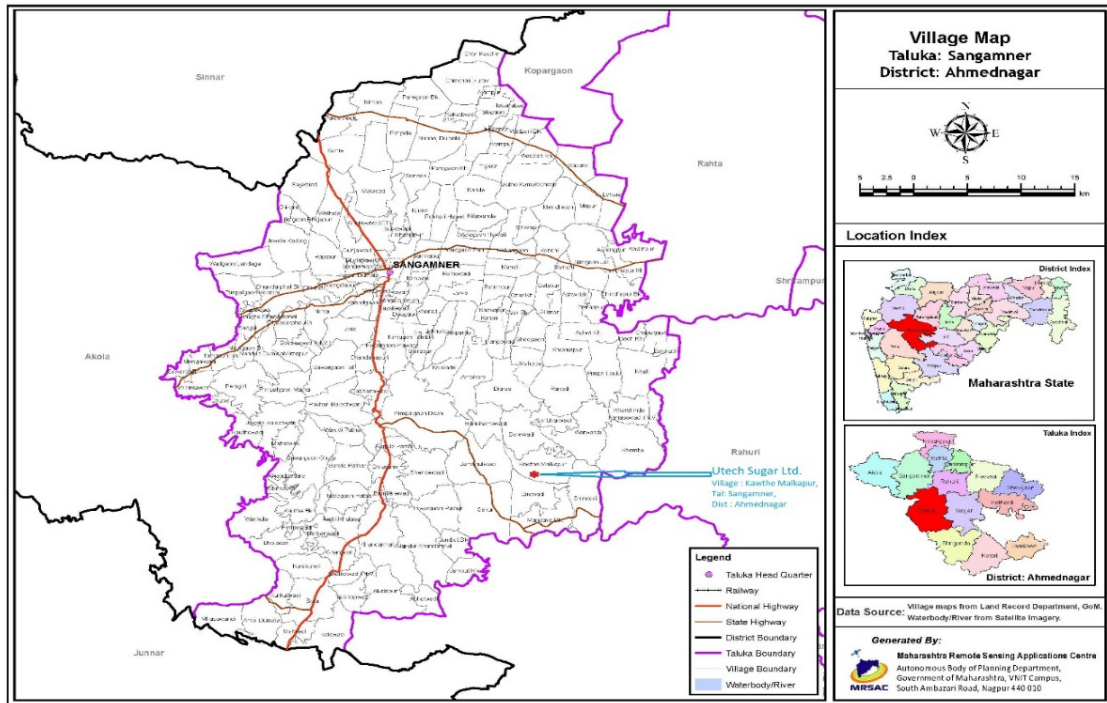
22	Selling price of Ethanol	Rs 40.85 per litre
23	Project Cost	Rs.8630.00 lakh.

### 3.2 Site Connectivity and environmental Sensitivity

1	Nearest Village	Kavthe Malkapur 310 meter
2	Nearest Town / City	Sangamner 23.64 km
3	State Highway	State Highway No. 49 is 50 Meter
4	Nearest National Highway	NH 222 is 25.21 km
5	Nearest Railway station	Rahuri railway station is 35.26 km
6	Nearest Airport	Shirdi airport is 33.67 km
7	National Parks, Reserved Forests (RF) / Protected Forests (PF), Wildlife Sanctuaries, Biosphere Reserves, Tiger/ Elephant Reserves, Wildlife Corridors etc. within 10 km Radius	Warwandi Reserve forest 3.5 km towards north Direction, Chikaldhan Reserve forest 2.5 km towards East Direction and Reserve forest 6.4 km towards South Direction.
8	River / Water Body	Mula river is 5.02 km, towards South Pravara river 14.93 km towards North

Executive Summary For M/s. Utech Sugar Ltd.  
Village : Kavthe Malkapur, Tal : Sangamner, Dist : Ahmednagar

3.3 Site Location:



Google Image of the Project



Executive Summary For M/s. Utech Sugar Ltd.  
Village : Kavthe Malkapur, Tal : Sangamner, Dist : Ahmednagar

### **Project Implementation Schedule**

The promoters have planned to complete the proposed integrated expansion by October 2019.

### **3.4 Land and site development**

The sugar factory has already in possession land of about 45.81 acres and is sufficient for the proposed expansion. Most of the land is plain with not much level difference and strata of the land are quite hard. There is no need for site development work for sugar and cogen project. However, site development expenses will be required for ethanol plant.

The cost estimated for the site development component for ethanol plant is Rs 60 lakh. This includes leveling of site, compound with fencing along with gate, internal roads, culverts and drainage system for water and green belt development.

### **3.5 Employment Potential**

The captioned project will envisage additional employment for about 71 personnel of various skills and categories mainly in ethanol plant. Apart from this, all associated projects for efficiency improvement, fuel collection, storage, substitution, etc will give potential for employment in the rural masses, adjoining the USL location and improve their economic status.

### **3.6 Details of the alternate sites**

No alternate sites have been examined, as proposed project will be located in existing factory Premises.

### **3.7 Raw Material and its Sustainability**

#### **3.7.1 Sugar Plant :**

Ahmednagar district have good cane potential. Black soil available in the district is suited for any kind of cultivation and the area is blessed with adequate irrigation facilities. This district is famous for its rich agricultural production, as it is situated in near Godavari, Mula & Pravara Rivers.

The total area under irrigation in the command area is about 103887 ha, mainly through water available from the various projects on the Mula, Bhandardara & Pravara Projects. Flood irrigation method is commonly used to irrigate the cane fields

Executive Summary For M/s. Utech Sugar Ltd.  
Village : Kavthe Malkapur, Tal : Sangamner, Dist : Ahmednagar

The yields of the different varieties of the cane vary, depending on agro-climatic conditions and water availability, from year to year. On an average the yield is expected to be around 100 MT/Ha.

In order to get better sugar recovery the ideal ratio of Early, mid late and late maturing varieties should be 40:40:20. In the proposed area of USL, this should be encouraged so that farmers, who plant the late maturing varieties, are given necessary incentives.

To encourage farmers and assure continuous and assured supply of cane from them, it is recommended that USPL should supply all inputs like seed cane, fertilisers etc. to farmers through bank loans, by issuing suitable guarantees for recovery of bank loans.

It is recommended that USL should also sponsor cane development schemes on its own and / or with the help the farmers in its command area, for availing financial assistance. This will help USL in ensuring assured availability of cane, on a long-term basis.

USL has already appointed skilled & experienced personnel within Agronomy Department. With these sustained efforts, USL is sure of getting the required sugarcane for its expanded capacity, by the time plant is commissioned.

### **3.7.2 Cogen Power Plant**

Bagasse is the main source of fuel that will be available from the sugarcane crushing of 8.00 lakh MT after expansion. This is purely green source of fuel and will not pose any pollution to environment.

The cogen plant will be operated for 160 days to cater steam to sugar process during season. The sugar plant will generate about 2,20,000 MT of bagasse. Cogen power plant after expanding it to 18 MW, will use around 160000 MT of bagasse during season & balance bagasse after consuming around 9785 MT for the distillery/ethanol plant boiler for its operation will be used for off-season cogen plant operation.

### **3.7.3 Ethanol Plant**

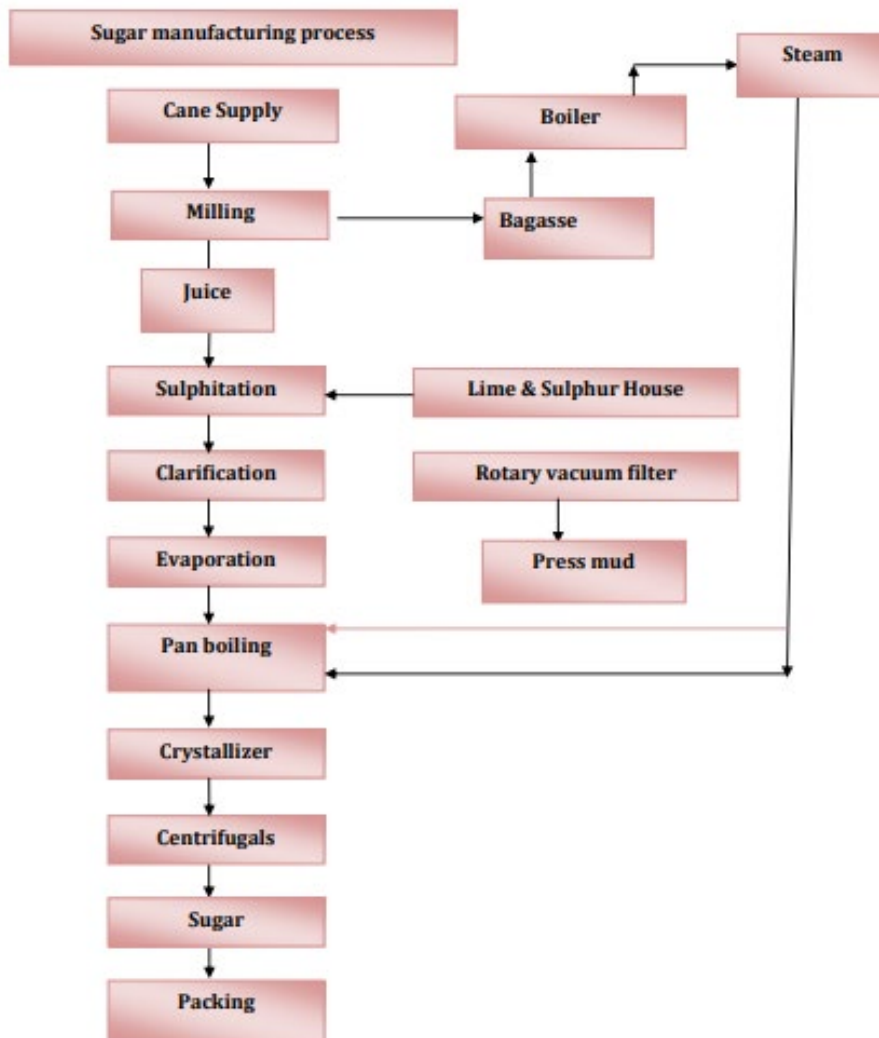
Molasses generated from the sugar mill is the main source for ethanol plant that will be available from the sugarcane crushing.

Executive Summary For M/s. Utech Sugar Ltd.  
Village : Kavthe Malkapur, Tal : Sangamner, Dist : Ahmednagar

After expansion to 5000 TCD and 8 lakh MT of cane crushing, the molasses will be available from sugar mill is around 34000 MT. Hence, the own raw material availability for the ethanol plant will be assured and will not face any difficulty for its operation for 270 days.

#### 4.1 Manufacturing process

##### Sugar manufacturing process



##### Cogen Power Plant

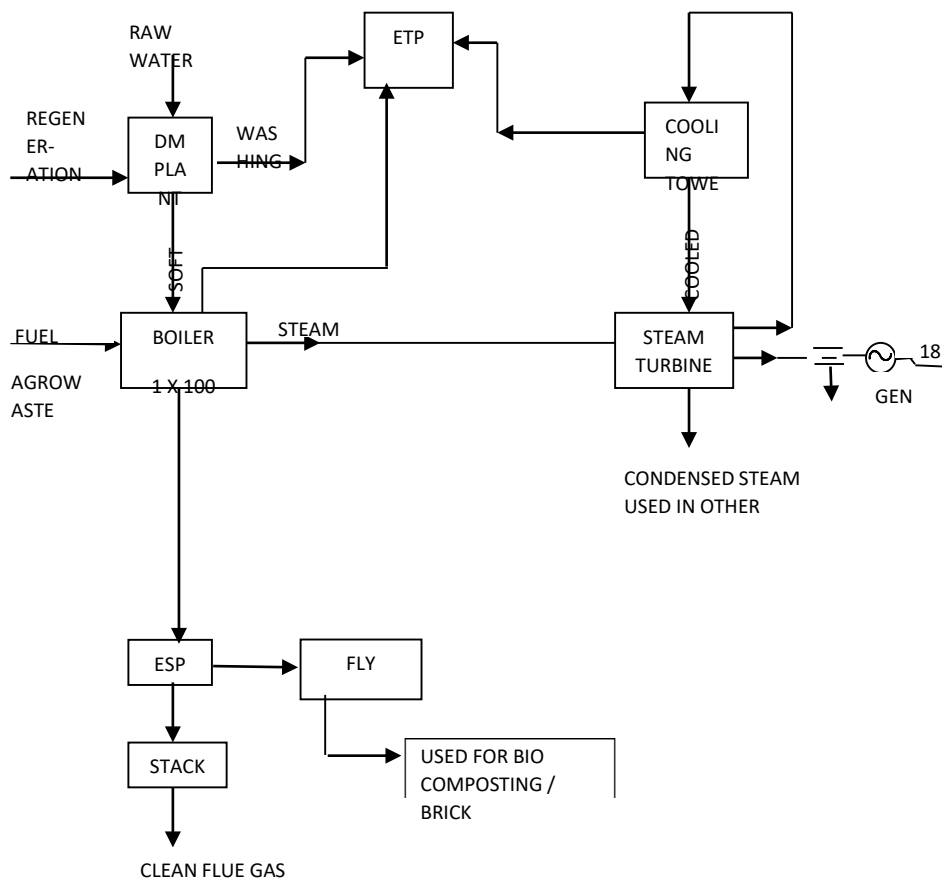
The Cogen power plant of 14 MW will be upgraded to 18 MW by carrying out modifications / upgradation in boiler, turbine & Air-Cooled Condenser. The boiler capacity will be

Executive Summary For M/s. Utech Sugar Ltd.  
 Village : Kavthe Malkapur, Tal : Sangamner, Dist : Ahmednagar

increased to 100 TPH from existing 90 TPH. Two more cells will be added in Air Cooled Condenser for cooling additional steam extracted from turbine.

### Steam Balance

Sr. No.	Description	Season	Off-season
1	<b>Total steam Generated</b>	<b>100.00</b>	<b>75.60</b>
2	<b>Steam utilization</b>		
	Sugar process	86.36	0.00
	Distillery process	0.00	0.00
	Steam to auxiliaries	6.00	13.08
	Water addition if any	(1.82)	(0.26)
	Steam to Condenser	9.46	62.78
3	<b>Total</b>	<b>100.00</b>	<b>75.60</b>

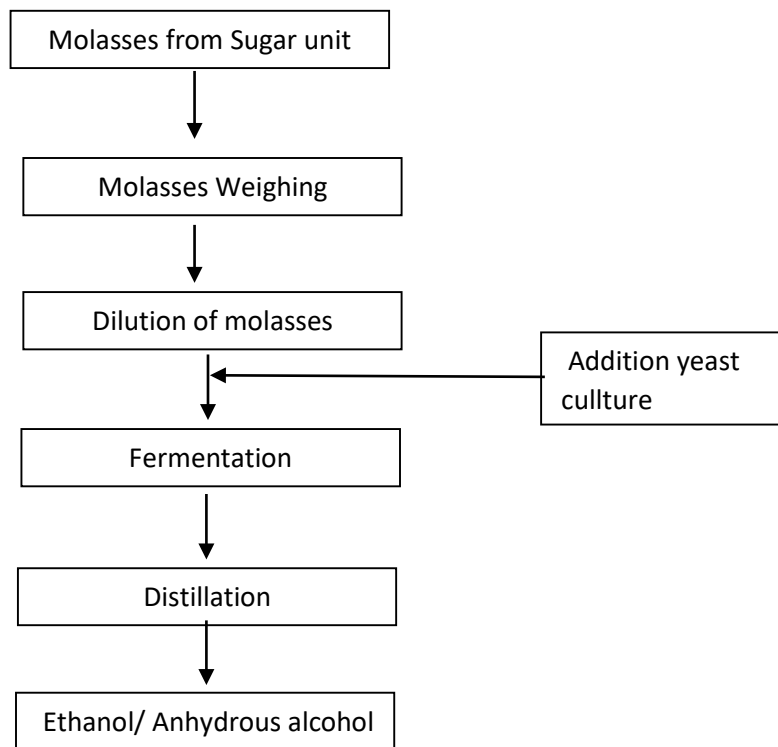


Executive Summary For M/s. Utech Sugar Ltd.  
 Village : Kavthe Malkapur, Tal : Sangamner, Dist : Ahmednagar

The design parameters of the ethanol plant are given in the following table :

Sr.no	Item	Value
1	Cane crushing, MT/day	3500
2	No. of season days	160
3	Cane crushing, MT	560000
4	No. of days of operation of Ethanol Plant	330
5	Ethanol capacity, KLPD	30
6	Molasses, % cane	4.25
7	Molasses Generation, MT	23800
8	Ethanol recovery, liters / MT of molasses as per SDF norm	235
9	Quantities	
	Molasses required MT per day	121.28
	Molasses required MT per Annum at 95% capacity utilization	40021
	Molasses Generation, MT	23800
	Molasses to be procured from outside	16221
10	LP Steam, TPH	9.00
11	Power, MW	1.00
12	Water requirement, KL/day @5 m <sup>3</sup> /KL	150
13	Spent wash generation per lit of RS after evaporation	4.00
14	Additional Bagasse Requirement, MT/annum	11361

**Ethanol production process flow chart**



Executive Summary For M/s. Utech Sugar Ltd.  
Village : Kavthe Malkapur, Tal : Sangamner, Dist : Ahmednagar

#### 4.2 Production details

Description	Crushing Year 2017-18
Sugar Cane (MT)	3.01
Bagasse (MT)	77542
Molasses (MT)	12696
Sugar Produced (MT)	33187
Sugar Recovery (%)	11.04
Molasses (% on cane)	4.22
Bagasse (% on cane)	25.80

#### 4.3 Water Requirement:

The water required is made available from the back water of Mula Dam which has huge amount of water for supply of required water throughout year for operation of the proposed project. The company has already lifted water from Mula River and constructed water supply scheme of 7 Km.

#### 4.4 Power Requirement

The surplus power from cogen plant is evacuated to 220 kV MSETCL Electrical Sub-station through LILO arrangement at Darewadi about 5 Km from site.

Company has already entered Power Purchase Agreement with MSEDCL.

### 3.1 Baseline Environment

#### 3.1.1 Topography:

The total geographical area of the Ahmednagar district is 174 Lakh hectores which is largest in Maharashtra, Topographical district can be divided into three parts as follows, a. A Sahyadri hill ranges North-west that is having highest peak at Kalsubai with a height of 1646 meters in the state. b. The Plateaus: Mainly Akole plateaus, Ahmednagar Plateaus, and Jamkhed plateaus having general elevation of 600 meters. c. The Basins; In between the plateaus there are river basins.



Executive Summary For M/s. Utech Sugar Ltd.  
Village : Kavthe Malkapur, Tal : Sangamner, Dist : Ahmednagar

### 3.1.2 Climate and Rainfall

The climate of the district is characterized by a hot summer and general dryness throughout the year except during the southwest monsoon season, i.e, June to September. The mean minimum temperature is 12.3°C and mean maximum temperature is 39.1°C. The normal rainfall over the district varies from 484 mm to about 879 mm. Rainfall is minimum in the northern parts of the district around Kopargaon and Sangamner and it gradually increases towards southeast and reaches the maximum around Jamkhed.

### 3.1.3 Geomorphology and Soil Types

Physiographically the district forms part of Deccan Plateau. Part of Sahayadri hill ranges fall in the district. Western Ghat section in Akole taluka is hilly which extends to relatively flat areas in Shevgaon and Jamkhed talukas in the east. From the main Sahayadri range three spurs namely Kalsubai, Baleshwar and Harishchandgad stretch eastwards. Physiographically the district can be broadly divided in four major characteristic landforms viz., hill and ghat section (7.6% area); foothill zone (19.4% area); plateau (3.71% area) and plains (occupy 69.30% area). The district lies partly in Godavari basin and partly in Bhima basin.

### 3.1.4 Air Environment

Ambient air monitoring was carried out of project site and 7 ambient air stations in buffer zones of the proposed site during March 2018 to May 2018 representing pre monsoon season.

Sr No	Locations	Geocodes	Direction	Distance from Project site in Km
1	Project site	19° 22' 40.74"N 74° 20'30.86"E	-	0
2	Kavthe malkapur	19° 23' 21.21" 74° 20'28.7"	North	1.2
3	Varavandi	19° 25' 16.85 " 74° 22'41.1."	Northwest	6.2
4	Shindodi	19° 21' 23.28" 74° 22'09.9"	Southwest	3.8

Executive Summary For M/s. Utech Sugar Ltd.  
Village : Kavthe Malkapur, Tal : Sangamner, Dist : Ahmednagar

5	Mandave kh	19° 19' 20.14" 74° 20'14.23"	South	6.4
6	Sakur	19° 22' 45.81" 74° 17'28.03"	East	5.3
7	Rankhambhwadi	19° 25' 42.81" 74° 17 '37.2"	North east	7.5
8	Khambe	19° 23' 54.52"74° 24'50.9"	North North West	9.8

At each station, ambient air was monitored for 24-hour duration and samples were collected at a frequency of twice a week and analysed for PM<sub>10</sub>, PM<sub>2.5</sub>, Sulphur dioxide, Oxides of Nitrogen, Carbon Monoxide.

For all AAQM site the respective concentrations of SO<sub>2</sub>, NO<sub>x</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>, was found well within the permissible limits prescribed by CPCB

### **3.1.5 NOISE LEVEL**

Noise levels monitored at Project site, Kavthe malkapur, Varavandi, Shindodi, Mandave kh, Sakur, Rankhambhwadi, Khambe were analysed in terms of Residual, Medium, Peak, Equivalent, Daytime and Night Time Noise Levels

### **3.1.6 WATER ENVIRONMENT**

#### **3.1.6.1 Ground water Quality**

Ground water samples from bore well or dug well were collected from Project Site, Kavthe malkapur, Varavandi, Shindodi, Mandave Kh, Sakur, Rankhambwadi, and Khambe and analyzed.

#### **3.1.6.2 Surface Water Quality**

The surface water sample of river Mula at Mandave Kh and back water of Mula river dam at Sheri village has been collected and analyzed.

### **3.1.7 Soil Quality and Cropping Pattern**

Soil: In Ahmednagar district the examination of soil reveals that there are relatively more fertile and deep black in Shrirampur, Newasa and Kopargaon. There are such as Ahmednagar, Pamer, Sangamner, Pathardi, Jamkhed and Shrigonda that have relatively a higher proportion of shallow soil.

Executive Summary For M/s. Utech Sugar Ltd.  
 Village : Kavthe Malkapur, Tal : Sangamner, Dist : Ahmednagar

Soil samples from project site, Kavthe malkapur, Varavandi, Shindodi, Mandave Kh, Sakur, Rankhambhwadi, and Khambe were analysed.

### 3.1.8 Ecology and Biodiversity

Biodiversity encompasses the variety and variability of life on Earth. It refers to the differences within and between all living organisms at this different level of biological Organization – genus, individuals, species and ecosystems. Biodiversity embraces all living organisms and their genetic diversity.

**Field study period:** The ecological survey has been conducted for winter season. The ground truthing has been conducted on 02<sup>nd</sup> Dec 2018.

List of Plant Species within 10 km radius

Sr. No.	Scientific Name	Local Name	Family	Flowering	Fruits	Medicinal value	Timber
1	<i>Acacia nilotica</i>	VediBabul	<i>Fabaceae</i>	+	+	-	+
2	<i>Aegle marmelos</i>	Indian Bael	<i>Rutaceae</i>	+	+	-	-
3	<i>Ailanthus excelsa</i>	Maharukh	<i>Simaroubaceae</i>	-	-	-	-
4	<i>Albizia lebbeck</i>	Frywood	<i>Fabaceae</i>	-	-	+	-
5	<i>Albizia procera</i>	White Siris	<i>Fabaceae</i>	+	+		+
6	<i>Alangium salvifolium</i>	Alangiaceae	Ankul	+	+	+	-
7	<i>Annona squamosa</i>	Sitaphal	<i>Annonaceae</i>	+	+	+	-
8	<i>Azadirachta indica</i>	Neem	<i>Meliaceae</i>	+	+	+	+
9	<i>Bauhinia purpurea</i>	Purple orchid	<i>Fabaceae</i>	+	+	-	+
10	<i>Bauhinia racemosa</i>	Apta	<i>Fabaceae</i>	+	+	-	+
11	<i>Butea monosperma</i>	Palash	<i>Fabaceae</i>	+	+	-	+
12	Bambusoideae	Bamboo	Poaceae	+	+	-	+
13	<i>Cassia fistula L.</i>	Golden rain tree	<i>Fabaceae</i>	+	-	-	+
14	<i>Cocos nucifera</i>	coccount	<i>Arecaceae</i>	+	+	+	+
15	<i>Dalbergia sissoo</i>	Shisham	<i>Fabaceae</i>	+		+	+
16	<i>Delonix regia</i>	Gulmohar	<i>Fabaceae</i>	+	-	-	-
17	<i>Emblica officinalis</i>	Ambla	<i>Phyllanthaceae</i>	+	+	+	-

Executive Summary For M/s. Utech Sugar Ltd.

Village : Kavthe Malkapur, Tal : Sangamner, Dist : Ahmednagar

18	<i>Eucalyptus globulus</i>	Nilgri	<i>Myrtaceae</i>	-	-	-	-
19	<i>Ficus benghalensis</i>	Indian banyan tree	Moraceae	+	+	+	-
20	<i>Ficus racemosa</i>	Umar	<i>Moraceae</i>	+	+	+	-
21	<i>Ficus religiosa</i>	Pipal	Moraceae			+	+
22	<i>Mangifera indica</i>	Mango	Anacardiaceae	+	+	+	+
23	<i>Nyctanthes arbor-tristis L.</i>	<i>Oleaceae</i>	<i>Parijat</i>	+			
24	<i>Phoenix sylvestris</i>	Khajur	<i>Arecaceae</i>	+	+	+	-

List of Herbs species within 10 km radius

S.No.	Scientific Name	Family	Common name
1	<i>Ageratum conyzoides L.</i>	Asteraceae	Burando
2	<i>Ageratum conyzoides L.</i>	<i>Asteraceae</i>	<i>Osadi</i>
3	<i>Aloe vera (L.)</i>	Liliaceae	Korphad
4	<i>Amaranthus spinosus L.</i>	Amaranthaceae	Kateri-Math
5	<i>Amaranthus viridis L.</i>	<i>Amaranthaceae</i>	<i>Math</i>
6	<i>Andropogon sprengelii Kunth</i>	Poaceae	<i>Dongar gavat</i>
7	<i>Asparagus racemosus</i>	Liliaceae	<i>Shatavari</i>
8	<i>Bacopa monnieri (L.)</i>	<i>Scrophulariaceae</i>	<i>Nira-Brahmi</i>

List of shrubs species within 10 km radius

S.No.	Scientific Name	Family	Common name
1	<i>Argemone Mexicana L.</i>	Papaveraceae	Pricky Poppy
2	<i>Abrus precatorius</i>	<i>Fabaceae</i>	Chanoti
3	<i>Barleria prionitis Sant.</i>	<i>Acanthaceae</i>	<i>Vjradanti</i>
4	<i>Bougainvillea spectabilis</i>	Nyctaginaceae	Bougainvillea
5	<i>Citrus lemon</i>	Rutaceae	Nimbu
6	<i>Cassia tora L.</i>	<i>Fabaceae</i>	<i>Senna Tora</i>
7	<i>Cassia sophera L.</i>	<i>Fabaceae</i>	<i>Kasaunda</i>
8	<i>Carissa congesta Wight.</i>	Apocynaceae	Karvand
9	<i>Calotropis procera</i>	Asclepiadaceae	Crown Flower
10	<i>Curcuma longa</i>	Zingiberaceae	Turmeric

Executive Summary For M/s. Utech Sugar Ltd.  
 Village : Kavthe Malkapur, Tal : Sangamner, Dist : Ahmednagar

11	<i>Cynodon dactylon (L.)</i>	Poaceae	<i>Durva</i>
12	<i>Datura innoxia</i>	Solanaceae	<i>Dhotra</i>

## Faunal Biodiversity

### List of Birds

Birds				
Sr.n o	Common name	Scientific name	Family	Conservation status
1)	Asian Plam swift	<i>Cypsiurus balasiensis</i>	Apodidae	Least concern
2)	Small Minivet	<i>Pericrocotus cinnamomeus</i>	Campephagidae	Least concern
3)	House swift	<i>Apus nipalensis</i>	Apodidae	Least concern
4)	White throated fantail	<i>Rhipidura albicollis</i>	Rhipiduridae	Least concern
5)	Hoopoe	<i>Upupa epops</i>	Upupidae	Least concern
6)	Rose Ringed Parakeet	<i>Psittacula krameri</i>	Psittaculidae	Least concern
7)	Shikra	<i>Accipiter badius</i>	Accipitridae	Least concern
8)	Indian robin	<i>Saxicoloides fulicatus</i>	Muscicapidae	Least concern
9)	Oriental magpie-robin	<i>Copsychus saularis</i>	Muscicapidae	Least concern
10)	Brahminy starling	<i>Sturnia pagodavum</i>	Sturnidae	Least concern
11)	<i>Long-tailed shrike</i>	<i>Lanius schach</i>	Laniidae	Least concern
12)	House crow	<i>Corvus splendens</i>	Corvidae	Least concern
13)	Jungle Crow	<i>Corvus culminatus</i>	Corvidae	Least concern
14)	Green bee eater	<i>Merops orientalis</i>	Meropidae	Least concern
15)	House sparrow	<i>Passer domesticus</i>	Alaudidae	Least concern
16)	Brown rock chat	<i>Oenathe fusca</i>	Muscicapidae	Least concern

: List of Insects (butterfly) species within 10 km radius

Sr.no	Common name	Scientific name	Family
1)	Dung beetal	<i>Scarabaeus viettei</i>	Scarabaeoidea
2)	Common tiger butterfly	<i>Danaus genutia</i>	Nymphalidae

Executive Summary For M/s. Utech Sugar Ltd.

Village : Kavthe Malkapur, Tal : Sangamner, Dist : Ahmednagar

3)	Dorippus tiger	<i>Danaus dorippus</i>	Nymphalidae
4)	Common spider	<i>Achaearanea tepidariorum</i>	Theridiidae
5)	Dragon fly	<i>Anax indicus</i>	Aeshnidae
6)	Common emigrant	<i>Catopsilia Pomona</i>	Pieridae
7)	Common grass yellow	<i>Eurema hecabe</i>	Pieridae

List of Reptile species

Sr.no	Common name	Scientific name	Conservation status
1)	Python	<i>Python molurus</i>	Least concern
2)	Jerdons snake eye lizard	<i>Ophisops jerdonii</i>	Least concern
3)	Oriental garden lizard	<i>Calotes versicolor</i>	Least concern
4)	Russel viper	<i>Vipera russelli</i>	Not Evaluated
5)	Indian cobra	<i>Naja naja</i>	Least concern
6)	Dhaman	<i>Ptyus mucosa</i>	Not Evaluated
7)	Saw scaled viper	<i>Echis carinatus</i>	Least concern
8)	Fan throated lizard	<i>Sitana spp.</i>	Least concern

List of Mammal Species

Sr.no	Common name	Scientific name	Conservation status
1)	Golden Jackal	<i>Canis aureus</i>	Least concern
2)	House Rat	<i>Rattus rattus</i>	Least concern
3)	Spotted Deer	<i>Axis axis</i>	Least concern
4)	Chinkara	<i>Gazella bennettii</i>	Least concern
5)	Indian Fox	<i>Vulpes bengalensis</i>	Least concern
6)	Indian hare	<i>Lepus nigricollis</i>	Least concern
7)	Sheep	<i>Ovis</i>	Least concern
8)	Indian Plam Squirrel	<i>Funambulus palmarum</i>	Least concern

Executive Summary For M/s. Utech Sugar Ltd.  
Village : Kavthe Malkapur, Tal : Sangamner, Dist : Ahmednagar

9)	Indian grey mongose	<i>Herpestes edwardsi</i>	Least concern
10)	Indian Wild Boar	<i>Sus Scrofa</i>	Least concern
11)	Black buck	<i>Antilope cervicapra</i>	Near threatened

#### **4.1 Anticipated Environmental Impact and Mitigation measures**

##### **4.1.1 IMPACT DURING CONSTRUCTION PHASE**

Project construction phase will be of one and half year whose activities will surely show effects on land environment, water, air, noise level, soil quality, socio-economic trend etc. This activity will have a positive impact in case of Socio-economic culture for the people in the nearby villages

##### **Land Environment**

Some excavation, land filling and development aspects may be needed for levelling of the ground.

##### **Impact due to solid residue, ash from co-generation**

Ash formation will occur due to use of Bagasse as fuels in Cogeneration plant. Formed ash will be collected, mixed in press mud & distributed free to farmers during season & during off season will be given to nearby brick manufacturers it can also be used as a material for land filling.

##### **Water Environment**

During construction hardly 15 m<sup>3</sup> water will be required for slab working. The construction activity will not have any effect on ground as well as surface water. Even the domestic waste water generated in the labour camp is also very low since the number of worker is 70.

##### **Mitigation**

Waste water generated during construction is Proper sanitation facility will be provided with septic tank and bio toiler or mobile toilet for workers so that there will be no negative impact on water.

##### **4.1.3 Air Environment**

During construction activity there is a probability of increase in Particulate Matter(PM) due to transportation of trucks, trolleys construction debris, cement etc.

**Mitigation:** All the vehicles permitted at the project site will be possessing Pollution under control certificate. There will be provision of water sprinkling on the project site to control

Executive Summary For M/s. Utech Sugar Ltd.  
Village : Kavthe Malkapur, Tal : Sangamner, Dist : Ahmednagar

dust emission. Also, MoEF & CC, New Delhi Notification No. G.S.R. 94(E) dated 25<sup>th</sup> January, 2018 shall be implemented on site.

Following Mitigation measures will be implemented:

1. Roads leading to or at construction sites must be paved and blacktopped (i.e. metallic roads).
2. No loose soil or sand or Construction & Demolition Waste or any other construction material that causes dust shall be left uncovered.
3. Dust mitigation measures shall be displayed prominently at the construction site for easy public viewing.

#### **4.1.4 Noise Environment**

The construction activity will generate noise due to vehicles like trucks and machinery like bulldozers, concrete mixers, cranes etc. the noise levels are between 70 to 80 dB.

**Mitigation:** All the workers involved in the construction works are provided with ear plugs to avoid continuous exposure of noise. Noise exposure can also be minimized by shock absorbing techniques such as noise barriers, silencers etc. in the equipment. Also, periodical maintenance of equipment's and vehicles need to done.

#### **4.1.5 Occupational Safety**

During the construction there are chances of minor or major accidents at the site. All precautionary measures will be taken as per Factory Act, 1948 and its amendments.

#### **Mitigation:**

All the workers will be provided with helmets, goggles and safety instructions in the form of manuals and also first-aid will be made available. All the PPE(Personal Protective Equipment) usage is mandatory on site and no deviation is allowed.

### **4.2 IMPACT DURING OPERATION PHASE**

The operations and their respective impacts in a sugar, co-gen power and ethanol manufacturing units are as follows:

#### **4.2.1 Impact on Land or soil**

The solid waste generated from the sugar unit is mainly in the form of molasses, press mud and Bagasse. The fly ash will be generated from cogen power plant. This solid



Executive Summary For M/s. Utech Sugar Ltd.  
Village : Kavthe Malkapur, Tal : Sangamner, Dist : Ahmednagar

waste in case dump on land will create soil degradation or underground water pollution.

**Mitigation:**

Molasses formed from the sugar unit acts as a raw material for ethanol production. Press mud can be used as compost. Bagasse is the raw material for power generation from cogeneration unit. Fly ash generated during combustion in boiler will be used as a material in land filling as well as in brick manufacturing.

**Impact on water environment**

Water needed for plant will be available from Mula river . USL intends to intake 780 m<sup>3</sup>/day of water per day to fulfill the needs of mill, distillery, co-generation plant. The total water requirement of 280 m<sup>3</sup>/day, 240 m<sup>3</sup>/day shall be use for Distillery and 40 m<sup>3</sup>/day will be used for domestic purposes.

**Mitigation**

Waste water from Sugar mill will not have significant BOD/COD levels. All waste water will be collected in effluent treatment chambers, neutralized prior to discharge in the existing sugar plants.

In sugar mill maximum due water conservation will be achieved with precise equipment selection. Treated effluent water will have low BOD, COD values & be treated as per MPCB norms.

**Impact on Air Environment**

The common process involved in all the three units is the use of boiler and turbine. The air environment gets polluted due to emission of suspended particulate matter having particle size less than 10 microns. It also affects the crops grown in the nearby areas. So it has negative impact on the health of people.

**Fugitive Emission Management**

The following measure shall be adopted;

- Regular dust suppression with water sprinkler on the haul roads.
- Green belt development and afforestation in the plant.

Executive Summary For M/s. Utech Sugar Ltd.

Village : Kavthe Malkapur, Tal : Sangamner, Dist : Ahmednagar

- Tree plantation shall be done in an area of 15 acres and Seed nursery and other plantation is planned on 65000 sq.m of land.

**Mitigation:**

- To avoid negative impact on the air quality of nearby area mitigation measures such as effective stack height (i.e. 73m) and use of air pollution control devices such as Electrostatic precipitator is proposed which has efficiency of 99.9%.

**Impact due to transportation**

As a consequence of expansion of sugar mill erection & operation, vehicle traffic to and fro for sugar cane, molasses, , finished materials sugar, alcohol etc. will be increased. Cane from local area can be brought with bullock carts, tractors & trucks. Transport of other items will be done with trucks. Traffic with jeeps, buses, cars, etc. will also be there. Traffic on road will create rise in particulate matter.

**Mitigation**

USL puts a strategy to check regularly the PUC of all vehicles, servicing & maintenance, in order to have minimum environmental impact due to the vehicle exhaust emission. Tree plantation plans will ensure the target of minimum fugitive emissions.

**Impact on Noise environment**

Excessive exposure to noise produces varying degree of damage to hearing system. It leads to headache, fatigue etc. the main sources of noise are steam turbine, boiler, DG sets, blowers etc. most of them generate noise level up to 70-90 dB(A).

**Mitigation**

All the workers will be provided with ear plugs, proper maintenance of blowers and pumps when working near the equipment/machinery. All the transporters will be advice to carry out regular maintenance of their vehicles.

Executive Summary For M/s. Utech Sugar Ltd.  
Village : Kavthe Malkapur, Tal : Sangamner, Dist : Ahmednagar

## 5.1 Analysis of alternatives (Technology and Site)

### 5.1.1 SITE ALTERNATIVES

M/s. Utech Sugars Ltd. (USL) proposes to expand its integrated sugar, cogeneration power project & New Distillery at Kavthe Malkapur, Tal Sangamner, Dist Ahmednagar, Maharashtra in existing units. The proposed project is an expansion of sugar crushing capacity from 3800 to 5000 TCD, Cogen power plant 14 MW to 18 MW and New 30 KLPD distillery. The expansion plant is being set up in the existing 45.81 acres of land.

#### The site had been selected because of the following reasons:

1. Availability of already purchased land.
2. Proximity to water source(from Mula river);
3. Proximity to raw material source and cost-effective transportation of logistics;
4. Availability of infrastructural facility including road connection;
5. There are no eco-sensitive locations such as bio-sphere, mangrove, National parks etc. or environmental sensitive locations such as protected monuments, historical places within 10 km from the site.

## 6.1 Monitoring Programme

Post project monitoring schedule for various environmental parameters is given in Table

Particulars	Location	Frequency
Ambient Air Quality PM <sub>10</sub> , PM <sub>2.5</sub> , SO <sub>2</sub> , NO <sub>x</sub> , CO	Monthly AAQM at 4 locations(1 within plant and 3 outside plant)	Monthly
Flue gas from Chimney for flow rate, SPM, NO <sub>x</sub> , SO <sub>2</sub>	Within Plant	Monthly
Meteorological data	Within Plant	Daily
Ground Water	1 Km from spent wash tank 2 location on downward drainage pattern 1 on upward drainage 3 location in buffer zone	Half Yearly
Surface water	One sample at Upstream One sample at Downstream	Half-Yearly
Soil Sample	Nearby Farmers land	Half-Yearly (Pre-monsoon and Post Monsoon)
Waste Water	ETP Plant ( Inlet and Outlet)	Daily

Executive Summary For M/s. Utech Sugar Ltd.  
Village : Kavthe Malkapur, Tal : Sangamner, Dist : Ahmednagar

## **7.1 Additional Studies**

### **7.1.1. Risk Assessment**

The main objective of the risk assessment study is to propose a comprehensive but simple approach to carry out risk analysis. Risk analysis and risk assessment should provide details on Quantitative Risk Assessment (QRA) techniques used world-over to determine risk posed to people who work inside or live near hazardous facilities, and to aid in preparing effective emergency response plans by delineating a Disaster Management Plan (DMP) to handle onsite and offsite emergencies.

### **Mitigation Measures**

The purpose of mitigation is to identify measures that safeguard the environment and the community affected by this proposal. Mitigation is both a creative and practical phase of the EIA process. It seeks to find the best ways and means of avoiding, minimizing and remedying impacts.

### **7.1.2 Occupational Safety and Health**

The main factors of occupational health in proposed site are fugitive dust and noise. To avoid any adverse effects on the health of workers due to dust, heat, noise sufficient measures will be provided in the proposed project. These include:

- Provision of rest shelters for workers with amenities like drinking water, fans, toilets, etc.
- Provision of personal protection devices to the workers.
- First-aid facilities on the site.
- Mobile toilets will be provided during construction
- Ambulance will be provided for taking patient to the nearby hospital in case of emergency or medical.

### **7.1.3 DISASTER PREVENTIVE MEASURES**

The proposed plant will have following preventive measures to avoid occurrence of disasters:

- I. Specification & marking of safe area to gather in emergency.

Executive Summary For M/s. Utech Sugar Ltd.  
Village : Kavthe Malkapur, Tal : Sangamner, Dist : Ahmednagar

- II. Design, manufacture and construction of plant, machineries and buildings will be as per national and international codes as applicable in specific cases and laid down by statutory authorities.
- III. Provision of adequate access ways for movement of equipment and personnel shall be kept.
- IV. Minimum two numbers of gates to escape during disaster shall be provided.
- V. Fuel oil storage shall be in protected and fenced. The tank will be housed in a dyke wall. As per regulations of CCOE its testing & certification will be performed each 5 years regularly.

## **5.0 Environment Management Plan**

### **Wastewater Management**

#### **Sewerage system**

Domestic waste water generated will be sent to septic tank and soak pit.

#### **Effluent Treatment System**

The spent wash of a distillery process is a serious problem by way of threat to the environment. Its volume from fed batch/continuous fermentation plant is as large as 300 KL/day for a distillery of 30 KL/day capacity.

The spent wash evaporation technology is a multiple effect evaporator system in which heat recovered from one effect is used to concentrate spent wash in second effect evaporator with continuous recirculation of concentrated spent wash within the system until desired concentration is obtained. This entire concentration process is carried out under vacuum leading to less consumption of steam and maximum concentration of spent wash with in less period of time.

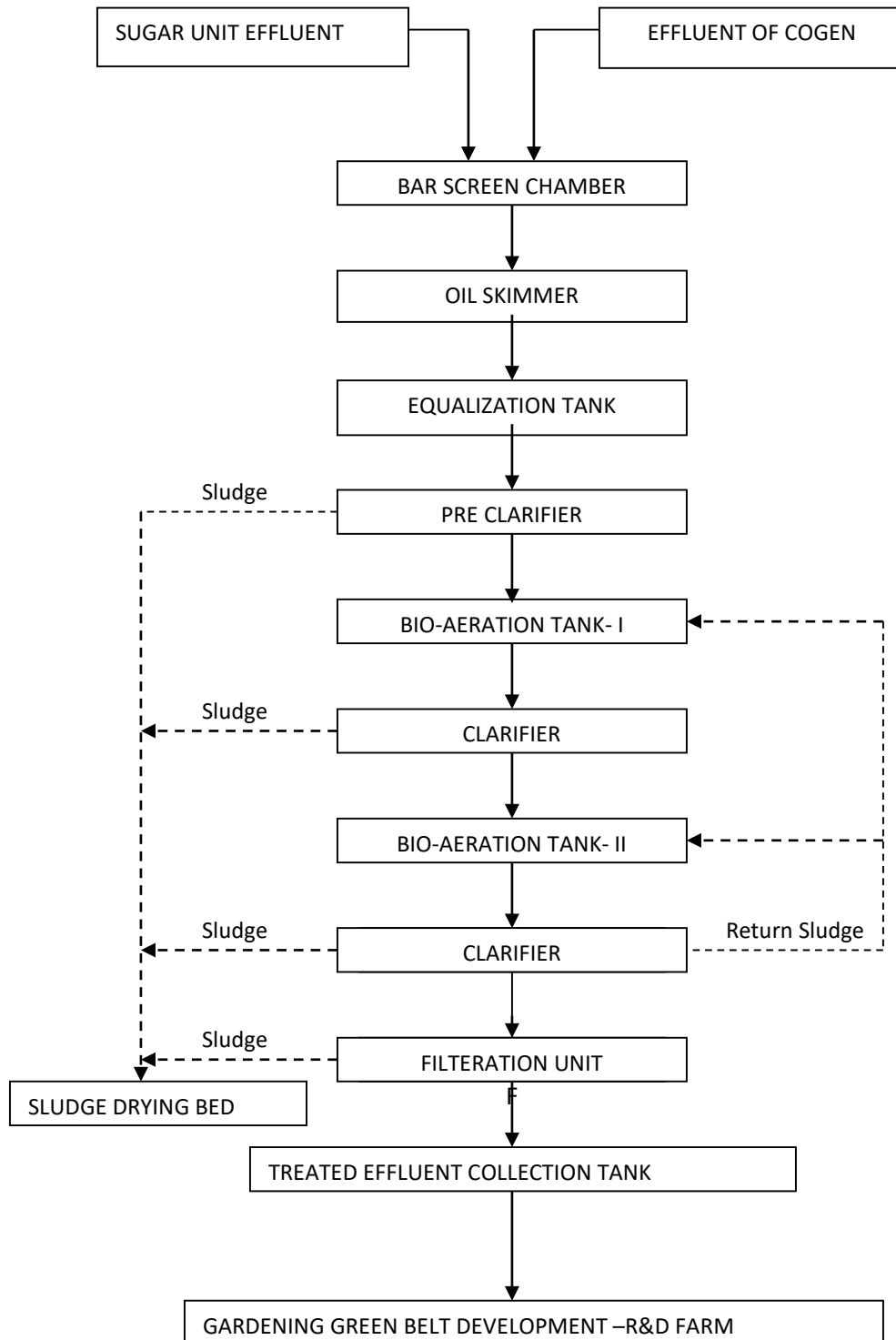
The concentrated spent wash generated after entire process of evaporation is then sprayed in a furnace with coal or bagasse as support fuel and is then burnt in a boiler.

In order to fulfill the pollution norms of MPCB & CPCB and to achieve zero liquid discharge and at the same time to operate the ethanol plant for 330 days, USL proposes to employ spent wash concentration and incineration technology, simultaneously generating steam and power required for the ethanol plant.

With effective utilization of such technology, major hurdle of spent wash disposal will be solved and the proposed ethanol plant will become zero liquid discharge unit.

Executive Summary For M/s. Utech Sugar Ltd.  
Village : Kavthe Malkapur, Tal : Sangamner, Dist : Ahmednagar

### ETP OF SUGAR COGEN COMPLEX



Executive Summary For M/s. Utech Sugar Ltd.  
Village : Kavthe Malkapur, Tal : Sangamner, Dist : Ahmednagar

### **5. 1 Air Pollution management**

Main air polluting elements discharged from the proposed Cogen Project include dust particulate from fly ash, Nitrogen oxides and Sulphur-di-oxide in the flue gas

The ESP is already installed to maintain the particulate matter emission below 100 mg/Nm<sup>3</sup> flowing through flue gases.

Bagasse contains minor quantity of sulphur. Hence, the chimney height is calculated as per the designated formula the problem of Sulphur can be tackled. The temperatures encountered in the boiler while burning high moisture bagasse are lower enough to minimize the nitrogen-oxides production. Moreover, the tender specification for boiler will stipulate over fire air system with staged combustion, to ensure reduction in nitrogen-oxide emission. Hence, no separate measures are taken to contain the nitrogen oxide pollutants.

### **5.2 Soild Waste Generation and Management**

In this project only bagasse as fuel is considered and no coal will be used. Total bagasse utilized during season will be 160000 MT and 60000 MT bagasse will be used in off-season and distillery boiler for 270 days. Ash generated will be 3200 MT & 1200 MT (total 4400 MT). Total ash is generated as bottom ash which is collected at the bottom of the boiler below grate (travelling grate or dumping grate) and fly ash which fly along with exhaust gases.

ESP is already installed to arrest the fly ash and same will be collected and sent to ash silo. ESP will be designed to maintain the particulate matter emission below 100 mg/Nm<sup>3</sup>.

The ash generated will be initially stored in silos and suitably supplied to the brick manufactures through trucks and also can be used to mix in the farms. As the ash generated from the bagasse has high potash value, same can be used to mix with press mud and use for bio-compost production and then sell it to farmers as fertilizer.

The sludge from primary clarifies, settling tank and secondary clarifier will be sent to sludge drying beds. Sludge will be dried in natural heat of sunlight. The dried cakes will be scrapped off periodically and can be utilized for as manure.

Executive Summary For M/s. Utech Sugar Ltd.  
 Village : Kavthe Malkapur, Tal : Sangamner, Dist : Ahmednagar

## 6.0 Rehabilitation and Resettlement

The project site is fully in possession over the years. This is a working factory since long. The present proposal is only for expansion Thus, no Rehabilitation or Resettlement issues are any more involved with no human settlement.

## 7.0 Cost of the project

Sr. no	Description	Sugar	Cogen	Ethanol	Total in Lakhs
1	Land	0.00	0.00	0.00	0.00
2	Site Development	0.00	0.00	60.00	60.00
3	Civil Works	180.00	30.00	1020.00	1230.00
4	Plant and Machinery	1593.00	974.00	3315.80	5882.80
5	Misc.Fixed Assets	295.00	0.00	542.80	837.80
6	Prelim& Pre op. Expenses	149.00	75.00	259.22	483.22
7	Contigencies	23.00	11.00	51.93	85.93
8	Working capital margin	0.00	0.00	50.25	50.25
	<b>Total</b>	<b>2240.00</b>	<b>1090.00</b>	<b>5300.00</b>	<b>8630.00</b>

### Proposed EMP Budget:

Sl. No.	Particulars	Capital cost (Rs. Lakhs)	Recurring Cost (Rs. Lakh/annum)
1	Air Pollution Control; to co-gen boiler comprising of wet scrubber, stack of 73 meter height	50	1.60
2	Water Pollution control; ETP Facility comprising of full fledged ETP- Primary, Secondary treatment with online monitoring system	300	5.00
3	Noise pollution control Enclosures for DG set	4.00	0.45
4	Occupational health; annual health check up	5	0



Executive Summary For M/s. Utech Sugar Ltd.

Village : Kavthe Malkapur, Tal : Sangamner, Dist : Ahmednagar

<b>Sl. No.</b>	<b>Particulars</b>	<b>Capital cost (Rs. Lakhs)</b>	<b>Recurring Cost (Rs. Lakh/annum)</b>
5	Environment monitoring and management	13.75	1.37
7	Green Belt development	7.1	0.85
	<b>Total</b>	<b>379.85</b>	<b>9.27</b>



# **EXECUTIVE SUMMARY IN MARATHI**



संक्षिप्त गोषवारा

मे. युटेक शुगर लिमिटेड .

गट नं. १०, ११/१, ११/२, १५/३ ( भाग)

गाव : कवठे मलकापूर, तालुका संगमनेर, जिल्हा : अहमदनगर,  
महाराष्ट्र

## १.० प्रस्तावना :-

महाराष्ट्र हे औद्योगिकदृष्ट्या एक विकसित राज्य आहे. कृषी प्रधान भारत देशात साखर उद्योग हा एक अतिशय महत्वाचा उद्योग आहे. देशाच्या एकूण साखर उत्पादनामध्ये महाराष्ट्राचा वाटा सुमारे ३५ टक्के इतका आहे. ग्रामीण प्रगतीस पोषक ठरलेले उद्योग म्हणजे साखर कारखाने.

सिंचनक्षम जमीन व सिंचान योजनांमुळे महाराष्ट्रात ऊस लागवड क्षेत्रात उत्कृष्ट वाढ झाली. त्यामुळे ऊसापासून साखर निर्मिती उद्योग मोठ्याप्रमाणावर वाढला. या उद्योगात ऊसापासून साखर तयार या एकाच उत्पादनावर बाजारात तग धरणे शक्य नाही. उसापासून चिपाड, मळी त्यांच्या साठवणीची जागा, विघटन व विजेचे वाढते दर यांमुळे या व्यवसायाची अस्थिरता वाढली. मळी व चिपाड यांच्या सहाय्याने मद्य व सहवीजनिर्मिती असा संयुक्त प्रकल्प करणे हि काळाची निकड ठरली. या उपक्रमाद्वारे साखर, मद्यार्क व स्वतःकरता वीजपुरवठा करून ग्रामीण भागासाठी उर्वरित वीज व्यापारी दरात पुरवणे शक्य होत आहे. अनेक साखर निर्मिती संकुलांनी याप्रमाणे बदलून संयुक्त प्रकल्प राबविले आहेत. यापैकी एक प्रकल्प अहमदनगर जिल्ह्यात युटेक शुगर मर्यादित या नावाने कार्यान्वित आहे.

## २.० संक्षिप्त गोषवारा

मे.युटेक शुगर मर्यादित, कवठे मलकापूर, तालुका : संगमनेर, जिल्हा- अहमदनगर यात सुरवातीला ३८०० टन प्रतिदिन गाळप क्षमता होती पण उसाच्या उपलब्धतेचे प्रमाण लक्ष्यात घेता व्यवस्थापनाने कारखान्याची क्षमता ३८०० टन प्रतिदिन गाळप वरून ५००० टन प्रतिदिन गाळप, सहवीजनिर्मिती प्रकल्प १४ मेगावॅट वरून १८ मेगावॅट आणि नवीन ३० कि.लि प्रतिदिन आसवनी प्रकल्पाचा प्रस्ताव आहे. संकलित प्रकल्पामध्ये साखर कारखान्यातून दर्जेदार साखरेच्या निर्मितीबरोबर सहविज निर्मितीसाठी लागणारी चिपाडे आणि आसवनी प्रकल्पासाठी लागणारी मळीची गरज भागवली जाणार आहे. त्यांच्याकडे प्रकल्पाची अंमलबजावणी करणारे सक्षम इंजिनिअर्स व इतर कार्यकारी दल उपलब्ध आहे.

## पर्यावरण तपासणी कायदा २००६

केंद्रीय पर्यावरण व वनमंत्रालयाने १४ सप्टेंबर २००६ रोजी पर्यावरण तपासणी कायदा मंजूर केला. पर्यावरण मंत्रालयाच्या अधिसूचना दि. १४.०९.२००६ व्दारे नवीन कारखाना / प्रकल्प अथवा विस्तार यासाठी संबंधित अधिकाऱ्याकडून पर्यावरण पूर्व मंजूरी घेणे बंधनकारक आहे. त्याप्रमाणे पर्यावरण व वनमंत्रालयाच्या, दिल्ली तज्ञ मूल्यमापन समितीने त्यांचे पत्र क्रं. IA- J- 11011/250 /2018 -IA-II (I) नुसार टी.ओ.आर ला मंजूरी मिळाली. त्या मार्गदर्शक सूचनांचा अवलंब करून पर्यावरण आघात मुल्यांकन अहवाल तयार करण्यात आला आहे.

३.० प्रकल्पाचे संक्षिप्त विवरण :

अनुक्रमांक	घटक	तपशील
१	कार्यालयाचा पत्ता	युटेक शुगर मर्यादित, २०५५, सदाशिव पेठ, अनंत रेसिडेन्सी, टिळक रोड, गिरीजा हॉटेल जवळ, पुणे ४११०३०.
२	प्रकल्प स्थळ	गट नं. १०, ११/१, ११/२, १५/३ ( भाग), गाव : कवठे मलकापूर, तालुका संगमनेर, जिल्हा : अहमदनगर, महाराष्ट्र
३	अक्षांश	१९° २२' ५१.३०" उ
४	रेखांश	७४° २०' ३३.५६" पू
५	जवळचे गाव	कवठे मलकापूर ३१० मीटर,
६	जवळचे शहर	संगमनेर २३.६४ किमी
७	राज्य महामार्ग	राज्य महामार्ग क्र. ४९ - ५० मीटर
८	राष्ट्रीय महामार्ग	राष्ट्रीय महामार्ग क्र. २२२ - २५.२१ किमी
९	रेल्वे स्टेशन	राहुरी रेल्वे स्टेशन ३५.२६ किमी
१०	एअरपोर्ट	शिर्डी एअरपोर्ट ३३.६७ किमी
११	आरक्षित जंगल	वरवंडी आरक्षित जंगल ३.५ किमी, चिखलधान आरक्षित जंगल २.५ किमी ,
१२	नदी	मुळा नदी ५.०२ किमी , प्रवरा नदी १४.९३ किमी
१३	उत्पादन	साखर, वीजनिर्मिती आणि अल्कोहोल
१४	सद्यस्थितीतील प्रकल्पाची क्षमता	साखर- ३८०० मे.टन प्रतिदिन, वीजनिर्मिती - १४ मेगावेट
१५	प्रस्तावित प्रकल्पाची क्षमता	प्रस्तावित साखरनिर्मिती : १२०० मे.टन प्रतिदिन, एकूण साखरनिर्मिती : ५००० मे.टन प्रतिदिन, प्रस्तावित वीजनिर्मिती : ४ मेगावेट एकूण वीजनिर्मिती : १८ मेगावेट नवीन आसवानी प्रकल्प : ३० कि ली प्रती दिन
१६	पाण्याची गरज	७७० घनमीटर प्रतिदिन
१७	विजेची गरज	साखर उत्पादन आणि कॉलनी साठी २५० kW, अल्कोहोलसाठी ८०० kW आणि सहवीजनिर्मिती १८०० kW

## ४.० प्रकल्पासाठी लागणारा कच्चा माल

साखर	ऊस
सहवीजनिर्मिती	चिपाडे,
आसवनी	मळी

### कच्चा माल नियोजन :

आसवनी प्रकल्पासाठी लागणाऱ्या ३२०० मे टन प्रतिवर्ष मळीची गरज ही याच कारखान्यातून पूर्ण होईल. कारखान्यातील मळीची विल्हेवाट, इंधन खर्च बचत यांचा विचार करून मळी हा योग्य पर्याय निवडला आहे.

रेक्ट्रीफाईड स्पिरिट, एक्स्ट्रा न्युट्रल अल्कोहोल व जलविरहित अल्कोहोल यांची निर्मिती करून योग्य किमतीस बाजारात त्याची विक्री करणे शक्य होईल.

### ५.० पर्यावरण तपासणी अहवाल :

या अहवालामध्ये माती, पाणी, हवामान, आर्द्रता, पर्जन्यमान, जैवविविधता, परिसरातील लोकजीवन स्थिती व प्रकल्पाचे संभाव्य प्रदूषण व त्यावरील परिणाम यांचा समावेश होतो.

### शून्य निःसारण योजना :

पर्यावरणाच्या व्यवस्थापनासाठी ५ कोटींची तरतूद करण्यात आली आहे. कारखान्यात निर्माण होणाऱ्या दूषित पाण्याचे योग्य प्रकारे व्यवस्थापन करण्यात आले आहे.

### हवामान

पश्चिमेकडील डोंगराळ भाग व पूर्वेकडील सखल भाग हे जिल्ह्याचे स्वाभाविक विभाग आहेत .

पश्चिम भागातील हवामान थंड व कोरडे तर पूर्व भागातील हवामान उष्ण व कोरडे आहे जिल्ह्यातील .

सरासरी पर्जन्यमान 382 मिमीटर . इतके असून पर्जन्यमानाची वाटणी असमान आहे.

गोदावरी व भीमा या जिल्ह्यातील प्रमुख नद्या आहेत अहमदनगर जिल्ह्याच्या उत्तर सीमेवरून गोदावरी .

नदी वाहते . वरा व मुळा या तिच्या उपनद्या आहेत . भीमा नदी जिल्ह्याच्या दक्षिण सीमेवरून वाहते .

दक्षिण भागातून सीना, हंगा, घोड या नद्या दक्षिणेकडे वाहतात काळी लालसर ., काळी बरड व पांढरी या प्रकारात जिल्ह्याची जमीन विभागलेली आहे

**हवा :** पर्यावरण परिणाम अभ्यासासाठी प्रकल्पस्थानापासून १० किमी त्रिज्येतील भूभाग व लाभक्षेत्र निवडले आहे. हा अभ्यास मार्च २०१८ ते मे २०१८ या काळात प्रत्यक्षरित्या त्या ठिकाणी निरीक्षण करून माहिती व तक्ते तयार करण्यात आले. कारखान्यापासून १० किमी त्रिज्येतील कारखाना परिसर, कवठे मलकापूर, वरवंडी, शिंदोडी, मांडवे खुर्द, साकुर, रणखांबवाडी आणि खांबे येथील हवेचे नमुने घेऊन ते प्रयोगशाळेत तपासणी साठी पाठविले त्याचे पृथःकरण खालील बाबींकरता करण्यात आले .

- कार्बन मोनाक्साईड
- सल्फर डायोक्साईड
- नायट्रोजन डायोक्साईड
- धुलीकण १० व २.५



## ध्वनी

मार्च २०१८ ते मे २०१८ या कालावधीत ध्वनी पातळी तपासण्यात आली. १० किमी त्रिज्येतील ८ ठिकाणी ही तपासणी केली. कारखाना परिसर, कवठे मलकापूर, वरवंडी, शिंदोडी, मांडवे खुर्द, साकुर, रणखांबवाडी आणि खांबे येथे नमुना चाचणी करण्यात आली. ते महाराष्ट्र प्रदूषण नियंत्रण मंडळाने घालून दिलेल्या मर्यादित आढळले.

## पाणी

मुळा नदीच्या पाण्याचे नमुने घेऊन त्याची तपासणी केली असता ते योग्य प्रमाणात असल्याचे आढळले.

## भूगर्भातील पाणी

अभ्यासक्षेत्रात कारखाना परिसर, कवठे मलकापूर, वरवंडी, शिंदोडी, मांडवे खुर्द, साकुर, रणखांबवाडी आणि खांबे येथील पाण्याचे कुपनलीकांचे नमुने तपासणीसाठी घेतले. ते महाराष्ट्र प्रदूषण नियंत्रण मंडळाने घालून दिलेल्या मर्यादित आढळले.

गोदावरी व भीमा या जिल्ह्यातील प्रमुख नद्या आहेत अहमदनगर जिल्ह्याच्या उत्तर सीमेवरून गोदावरी नदी वाहते भीमा नदी प्रवरा व मुळा या तिच्या उपनद्या आहेत. जिल्ह्याच्या दक्षिण सीमेवरून वाहते. दक्षिण भागातून सीना, हंगा, घोड या नद्या दक्षिणेकडे वाहतात काळी लालसर., काळी बरड व पांढरी या प्रकारात जिल्ह्याची जमीन विभागलेली आहे.

## पिके

रब्बी ज्वारी हे जिल्ह्याचे मुख्य पिक, खरीप हंगामात बाजरी, भूईमूग, मठ, सोयाबीन व मूग ही पिके तर रब्बी हंगामात ज्वारी, गहु, हरभरा ही पिके घेतली जातात ऊस हे जिल्ह्याचे प्रमुख नगदी. पिक असून त्यामुळे जिल्ह्याची आर्थिक प्रगती झाली आहे. द्राक्षे., संजी, डाळींबे इफळांचे उत्पादनही. जिल्ह्यात घेतले जाते

## जमिनीचा उपयोग

कारखाना क्षेत्राच्या १० कि. मी त्रिज्येतील जमीन वापर खालीलप्रमाणे सापडतो. १.५६% जंगल, ११.०५% सिंचन, ६८.५२% विनासिंचन, १०.१०% लागवडक्षम, ८.७४% पडीक व लागवड नसलेली.

## जैवविविधता :

या प्रकल्पाच्या लाभक्षेत्रामध्ये प्रामुख्याने खालील झाडे आढळतात.

झाडाची नावे खालील प्रमाणे:

ऐन, आंबा, अंजन, अंजीर, आपटा, अशोक, आवळा, बकुळ, बेल, बाभूळ, बोर, चंदन, चील्हारी, चिंच, डाळींब, धावडे, डिकामली, एरंड, हिंगन, हिवर, जांभूळ, करंज करवंद, कवठ, खैर, कडुलिंब, लिंबारा, मेडशिग, मेंदी, मोह, नारळ, लिंब, पळस, पाण्यार, पर्सा पिंपळ, पिंपळ, पिपर, रामफळ, रानबोर, रिठा, साग, सलाई, (सलई), शमी, शेवगा, शेवरी, शिंडी, शिरस, सीताफळ, सोनतरवड, तरवड, उंबर, वड.

## प्राणी :

प्रकल्पाच्या भागामध्ये प्रामुख्याने कोल्हा, लांडगा, साप, नाग, विंचू, ससा, मोर मैना, कावळा, चिमणी, कासव इ. प्राणी पाहायला मिळतात. या प्रकल्पाच्या स्थानाजवळ पाहणी करताना कुठल्याही

प्रकारचे दुर्मिळ प्राणी अथवा वनस्पती आढळली नाही.

### धोकादायक टाकाऊ पदार्थ :

स्थापत्य कामाचे वेळी कोणतेही धोकादायक टाकाऊ पदार्थ निर्माण होणार नाहीत.

### पर्यावरण संवर्धन योजना :

स्थापत्यपुर्तीमध्ये कामगारांना सर्व सुरक्षा साधने शिरस्त्राण, मोजे, बूट, सुरक्षा पट्टे, करणसन्नक्षक साधने देण्यात येतील. धुलीकण योग्य त्या मर्यादित ठेवण्यासाठी पाणी फवारणी केली जाईल. तसेच योग्य त्या जागी झाडे लावली जातील. व त्यांची मशागत केली जाईल. या कालावधीत पाणी मलनिस्सारण योजनेद्वारे स्वच्छ ठेवले जाईल.

### पर्यावरण विकास योजना :

पर्यावरणाची कायम राखणे, कमी कचरा किंवा शून्य कचरा व त्यावर प्रक्रिया करणे, वस्तूचा पूर्णलाभ, पुनर्वापर यांच्या पर्यावरण विकास योजनेत समावेश होतो. नियोजित आसवनी प्रकल्प उभारणी व सहवीज उत्पादन या कार्यक्रमात पर्यावरणास कुठल्याही प्रकारची हानी होणार नाही याची जाणीव पूर्वक तजवीज केली.

### प्रकल्पपुर्तीनंतर:

चीपाडावर आधारित बाँयलारसाठी ९९ % कार्यक्षमता असणाऱ्या electro static precipitator चा वापर धूळ रोखण्यासाठी केला जाईल.

स्टॅक चे उत्सर्जन नियमितपणे तपासले जाईल निशामकाची तरतूद जेथे शक्य असेल तेथे केले जाईल

साखर आणि सहवीजनिर्मिती मध्ये निर्माण होणारया सांडपाण्यावर प्रक्रिया करून ते पाणी हरितपट्टा तसेच उस लागवडीसाठी वापरण्यात येईल.

आसवनी प्रकल्पामध्ये तयार होणारे स्पेंटवॉश ट्रिपल इफेक्ट इव्हपोरेटर मध्ये संकेंद्रित करण्यात येईल आणि अतिरिक्त स्पेंटवॉश -स्पेंटवॉश फायर बाँयलर मध्ये वापरण्यात येईल अशाप्रकारे शून्य द्रव उत्सर्ग योजना अमलात आणली जाईल.

यासाठी महाराष्ट्र प्रदूषण नियंत्रण मंडळ सूचना आधारभूत असतील. यामुळे सद्य स्थितीतील पर्यावरणावर कोणताही आघात होणार नाही.

### पर्यावरण व्यवस्थापन :

पर्यावरण व्यवस्थापन योजना हि काळजीपूर्वक बनवण्यात आली आहे.

त्यामध्ये खालीलप्रमाणे सर्व गोष्टींचा विचार करण्यात आलेला आहे .

हवा प्रदूषण नियंत्रण	फ्लाय अॅश गोळा करण्यासाठी ESP ची तरतूद करण्यात आली आहे.
पाणी प्रदूषण नियंत्रण	पर्यावरण व्यवस्थापन योजनेमुळे शून्य विसर्जन
पाणी संरक्षण	पाण्याचा पुनर्वापर करण्यात येणार असल्यामुळे

	पाण्याची मोठ्या प्रमाणावर बचत होते.
ध्वनी प्रदूषण नियंत्रण	अकॉस्टिक एनक्लोजर ची तरतूद करण्यात आली आहे.
हरित पट्टा विकसित	हरित पट्टा विकसित करण्यात आला आहे.
सुरक्षा व्यवस्थापन	सुरक्षा उपकरणे जसे शिरस्त्राण, मोजे, बूट, सुरक्षा पट्टे,

### प्रदूषण नियंत्रक संयंत्राचा अंदाजित खर्च

अ. नं	विवरण	एकुण खर्च रु. लक्ष	प्रतिवर्ष पुनरावर्तन रु. लक्ष
१	हवा प्रदूषण नियंत्रण बाष्प संयंत्र	50	1.60
२	पाणी प्रदूषण नियंत्रण	300	5.00
३	ध्वनी प्रदूषण नियंत्रण, जनित्र संयंत्र ध्वनी	4.00	0.45
४	पेशानुरूप आरोग्य	5	0
५	पर्यावरण नमुना चाचणी व व्यवस्थापन	13.75	1.37
६	हरितपट्टा विकास	7.1	0.85
	एकुण खर्च	379.85	9.27

### आपत्ती निवारण योजना

नैसर्गिक कारणांमुळे येणाऱ्या आपत्तीसाठी पूर्वतयारी ठेवणे हे अतिशय आवश्यक आहे. आपत्ती व्यवस्थापन योजनेमुळे आपत्तीच्या वेळेची कल्पना येते व त्यासाठीच्या योजनेचे व्यवस्थापन केले जाते. अचानक निर्माण झालेल्या औद्योगिक अपघातामुळे खूप मोठ्या प्रमाणावर वैयक्तिक आणि आर्थिक नुकसानीला सामोरे जावे लागते. त्यामुळे अश्या घटनांतून होणारे नुकसान रोखण्यासाठी आपत्ती निवारण योजनेची खूप अंशी मदत होते. आपत्ती नियंत्रित करण्यासाठी आपत्ती नियंत्रण कक्ष स्थापन करण्यात येणार आहे.