P-657-LBDSSKL-EI-DISTILLERY-122022

SUMMARY ENVIRONMENTAL IMPACT ASSESSMENT (EIA) REPORT

(IN ENGLISH AND MARATHI)

FOR

ESTABLISHMENT OF 90 KLPD MOLASSES (B&C HEAVY)/ SUGARCANE SYRUP BASED DISTILLERY WITH 3 MW ELECTRICITY GENERATION

BY

LOKNETE BALASAHEB DESAI SAHAKARI SAKHAR KARKHANA LTD.

AT- POST DAULATNAGAR, MARALI VILLAGE,
TAL.: PATAN, DIST.: SATARA, MAHARASHTRA.

PREPARED BY

EQUINOX
Equinox Environments (India) Pvt. Ltd.

EQUINOX ENVIRONMENTS (I) PVT. LTD.,

ENVIRONMENTAL; CIVIL & CHEMICAL ENGINEERS, CONSULTANTS & ANALYSTS, KOLHAPUR (MS)

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AN ISO 9001 : 2015 & QCI - NABET ACCREDITED ORGANIZATION

JULY - 2023

Loknete Balasaheb Desai Sahakari Sakhar Karkhana Ltd;
Daulatnagar (Marali)- 415 211
Tal. Patan, Dist-Satara (M. S.)

लोकनेते बाळासाहेब देसाई सहकारी साखर कारखाना लि;
दौलतनगर (मरळी) पिन - ४१५ २११
ता. पाटण जि. सातारा (महाराष्ट्र)

FAX & ☎ : (02372) 268025/26/39/41, 9527223300/11 E mail:- maralisugar@yahoo.co.in web. www.maralisugar.com

REF NO.: Mfg /20/Dist. 2022-23 **DATE: 04.07.2023**

To,
The Member Secretary
Maharashtra Pollution Control Board (MPCB);
3rd& 4th Floor, Kalpataru Point,
Sion Circle, Sion (E),
Mumbai - 400 022

Sub.: Application for grant of Environmental Clearance (EC) in respect of establishment of 90 KLPD Molasses (B & C Heavy)/ Sugarvane syrup based distillery unit with 3 MW Captive Power Plant (CPP) by – **Loknete Balasaheb Desai Sahakari Sakhar Karkhana Ltd. (LBDSSL),** located at Gat No. 133/1/B, 133/2/B, 134, 135/3/B, 135/5, 149/1, 149/3, 151, 160/12, 160/18, 160/3, 160/7, 132, 133/1/A, 149/2, 160/11, 160/2, 160/4, 160/9, 131/1, 3, 6, 7, 8, 9, 10, 11, 12, 13 ,14, 15, At/P Daulatnagar, Marali Village, Tal.: Patan, Dist.: Satara Maharashtra State.

Ref.: 'Terms of Reference'(ToR) granted vide letter no. SIA/MH/IND2/423295/2023 dated 27.03.2023. Copy is enclosed at **Enclosure – I**.

Dear Sir,

We – **"Loknete Balasaheb Desai Sahakari Sakhar Karkhana Ltd. (LBDSSL)"** have planned to establish 90 KLPD Molasses (B & C Heavy)/ Sugarvane Syrup based distillery unit with 3 MW Captive Power Plant (CPP) at Gat No. 133/1/B, 133/2/B, 134, 135/3/B, 135/5, 149/1, 149/3, 151, 160/12, 160/18, 160/3, 160/7, 132, 133/1/A, 149/2, 160/11, 160/2, 160/4, 160/9, 131/1, 3, 6, 7, 8, 9, 10, 11, 12, 13 ,14, 15, At/P Daulatnagar, Marali Village, Tal.: Patan, Dist.: Satara Maharashtra State.

Accordingly, an application in Form – 1 format was submitted to the 'State Level Environment Impact Assessment Authority, Maharashtra' for grant of ToR's on 25.03.2023. Subsequently, standard ToR's were granted. Refer **Enclosure – I** for copy of ToR letter. In the ToR letter, directions were given to conduct Public Hearing w.r.t. our proposed project. Now, in order to conduct Public Hearing, we hereby are submitting all the relevant documents and information to your office.

Along with the Public Hearing application, a draft EIA Report as per the generic structure stipulated in MoEF Notification No. S.O.1533 (E) dated 14.09.2006 and amendments thereto; and Executive Summary Report in two languages (English and Marathi) are enclosed separately. The same provide details of Pollution Control Facilities, Production Processes and

Loknete Balasaheb Desai Sahakari
Sakhar Karkhana Ltd;
Daulatnagar (Marali)- 415 211
Tal. Patan, Dist-Satara (M. S.)

लोकनेते बाळासाहेब देसाई सहकारी
साखर कारखाना लि;
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ता. पाटण जि. सातारा (महाराष्ट्र)

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Raw Materials as well as Finished Products and Environmental Management Plan (EMP) etc. regarding the unit.

'Twenty Sets' of various documents, as mentioned above and equivalent number of soft copies of same have been submitted for your information and necessary further action.
Also, a Demand Draft of Rs. 1,00,000/- (Rs. One Lakhs only) bearing no. 368643 drawn on IDBI Bank dated 04.07.2023 towards the Public Hearing charges, as decided by the govt., has been presented herewith.

Please do the needful and oblige.

Thanking you.

Yours faithfully,

Mr. Suhas L. Desai
(Managing Director)

Encl.: 1. Executive Summary of project
2. A Draft EIA Report
3. A D.D. bearing No. 368643 dated 04.07.2023 drawn on 04.07.2023

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223/11, WANKAR BLDG.,
SHANIWAR PETH,,KARAD,MAHARASHTRA Pin - 415110
IFSC : IBKL0000470

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Summary of EIA Report
for
Establishment of 90 KLPD Molasses (B & C Heavy)/ Sugarcane Syrup Based Distillery With 3 MW Electricity Generation
By
Loknete Balasaheb Desai Sahakari Sakhar Karkhana Ltd. (LBDSSKL)

Daulatnagar, Marali Village , Tal.: Patan, Dist.: Satara, Maharashtra.

1) The Project

Loknete Balasaheb Desai Sahakari Sakhar Karkhana Ltd. (LBDSSKL) is located at Gat No.133/1/B, 133/2/B, 134, 135/3/B, 135/5, 149/1, 149/3, 151, 160/12, 160/18, 160/3, 160/7, 132, 133/1/A, 149/2, 160/11, 160/2, 160/4, 160/9, 131/1, 3, 6, 7, 8, 9, 10, 11, 12, 13 ,14, 15, At- Post Daulatnagar, Marali Village , Tal.: Patan, Dist.: Satara, Maharashtra. They have planned to establish 90 KLPD Molasses/ (B & C Heavy)/ Sugarcane Syrup based Distillery unit in the existing 1,250 TCD Sugar Factory.

As per the provisions of "EIA Notification No. S.O. 1533 (E)" dated 14.09.2006; and amended EIA Notification dated 13.06.2019 (Notification No. S.O. 1960 (E)) thereto issued by the MoEFCC; New Delhi. Accordingly, proposed distillery project is listed as activity ***5(g) (i) & (ii) - Distillery***; **Category 'B1``**. An application in Form I format was submitted to MoEFCC; New Delhi & granted standard ToRs on 13.09.2021.

Proposed establishment project will be formulated in such a fashion and manner so that the utmost care of Safety Norms and Environment Protection shall be taken. Details of capital investment are given in table 1.

Table 1 Project Investment Details

No.	Industrial unit	Capital Investment (Rs. Cr.)		
		Existing	Proposed	Total
1	Sugar Factory	47.23	--	47.23
2	Distillery	--	130	130
	Total	47.23	130	**177.23**

Table 2 Working Pattern

No.	Type of Activity	Days of Operation		
		Season	Off- Season	Total
1	Sugar Factory	180	--	180
2	Distillery	180	150	330

2) The Place

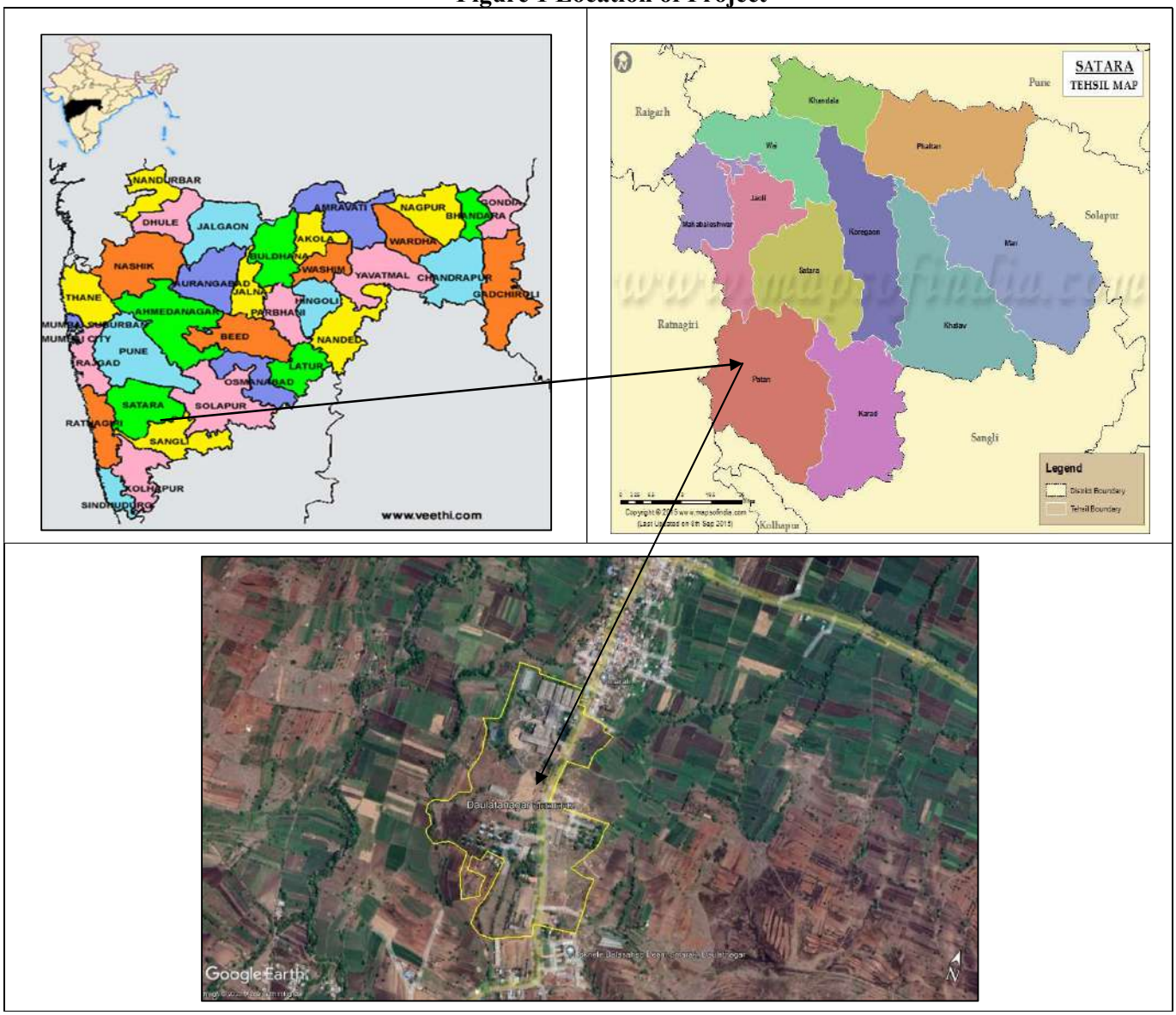
Proposed project will be implemented in the existing sugar of LBDSSKL. Total land acquired by the industry is 2,80,796 Sq. M. (28.07 Ha). Total built up area under existing sugar factory & proposed distillery unit will be 29,532.5 Sq. M. Detailed area break-up is presented at Table 3.

Table 3 Area Break up

No.	Description	Area (Sq.M)		
		Existing	Proposed	Total
1	**Total Plot Area**	**2,32,796**	**48,000**	**2,80,796**
2	**Total Built-up Area**			
	Sugar Factory	58,500	--	58,500

No.	Description	Area (Sq.M)		
		Existing	Proposed	Total
	Distillery	--	25,000	25,000
	Residential Colony	22,150	--	22,150
	Any Other Amenities	4,700	--	4,700
	Total Built-up Area	**85,350**	**25,000**	**1,10,350**
3	Area under Road	9,534.08	--	9,534.08
4	Parking Area (20%)	11,029	45130.2	**56,159.20**
5	Green Belt Area (33%)	25,271.64	67,391	**92,662.68**
6	Total Open Area	1,01,611	--	**12,090.04**

Figure 1 Location of Project



3) The Promoters

LBDSSKL promoters are well experienced in the field of sugar factory & distillery unit & have made thorough study of entire project planning as well as implementation schedule. Name and designation of the promoters are as under-

Table 4 List of Promoters

No.	Name	Designation
1.	Shri. Yashraj Shambhuraj Desai	Chairam
2.	Shri. Pandurang Annaso Nalawade	Vice Chairam
3.	Shri. Suhas L. Desai	Managing Director

4) The Products

The details of products as well as by-products in existing sugar & proposed molasses/cane juice based distillery activities has been presented in table below.

Table 5 Product & By-product for Integrated Complex

Industrial Unit	Products & Byproducts	Unit	Quantity		
			Existing	Proposed	Total
Proposed Distillery (90 KLPD)	RS/ ENA/ Ethanol	KLPD	--	90	90
	By-Products				
	CO_2 gas	MT/D	--	68	68
	Fusel Oil	KL/D	--	0.18	0.18
	Spentwash Powder	MT/D	--	72	72
Existing Sugar Factory (1,250 TCD)	White Crystal Sugar (12%)*	MT/D	162.5	--	162.5
	By-Products				
	Molasses (4%)*	MT/D	50	--	50
	Bagasse (30%)*	MT/D	375	--	375
	Pressmud (4%)*	MT/D	50	--	50

NOTE-: Percent of Cane Crushed.

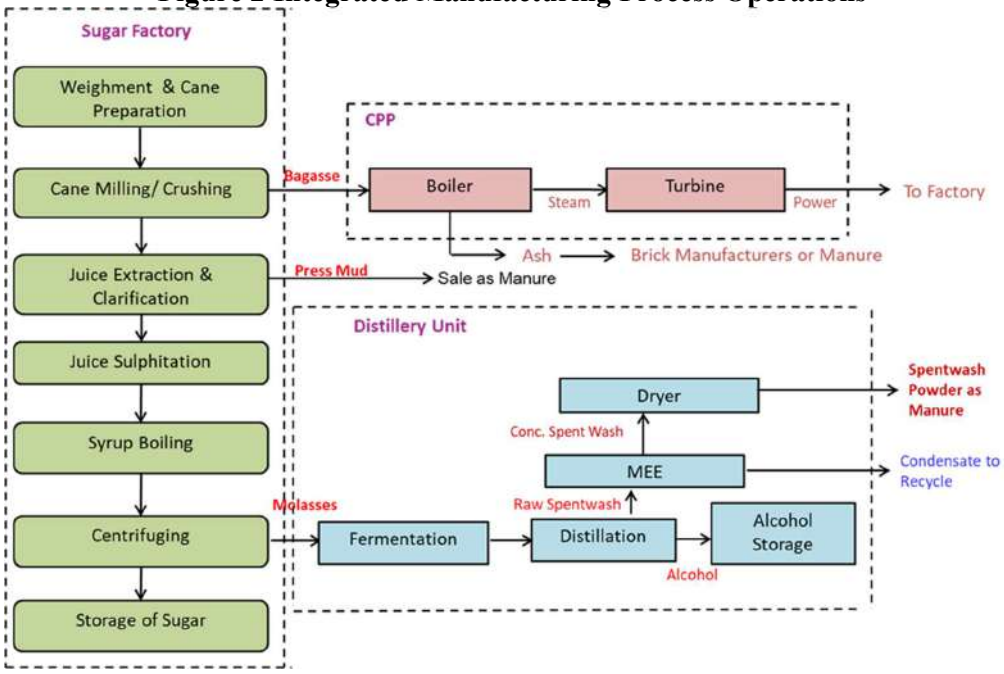
5) THE PURPOSE

Sugarcane potential, agro-climatic conditions, cost of conversion & overheads etc are the major deciding factors for fixing the crushing capacity of sugar factory. Today, sugar factories cannot survive in healthy condition on a single product i.e. sugar. Thus, it is essential to develop sugar factory into an affiliated complex so as to utilize the valuable by-products more profitably. Bagasse based cogeneration of steam and electricity has been practiced since long time in sugar mills. Molasses is also another important by-product of the sugar industry. Alcohol has assumed very important place in the Country's economy. It is a vital raw material for a number of chemicals and also a renewable source of energy. It has been a source of a large amount of revenue by way of excise duty levied by the Govt. on alcoholic liquors. It has a potential as fuel in the form of power alcohol for blending with petrol. Also, the fermentation alcohol has great demand in countries like Japan, U.S.A., Canada, Sri Lanka etc., as the synthetic alcohol produced by these countries, from naphtha of petroleum crude, is not useful for beverages. Considering the above facts as well as availability of raw material, management of LBDSSKL decided for establishment of distillery.

6) MANUFACTURING PROCESS

Detailed manufacturing process and flow diagram for sugar factory & distillery unit are given in Chapter 2 of EIA report. Manufacturing process of integrated project complex is presented at Figure 2.

Figure 2 Integrated Manufacturing Process Operations



7) ENVIRONMENTAL ASPECTS

LBDSSKL has implemented an effective 'Environmental Management Plan' and various aspects of the same are as follows: -

A) Water Use and Effluent Generation

a. Water Use

Details of water usage in existing & proposed activities are presented in Table 6 & 7.

Table 6 Details of Water Consumption in Existing Sugar Factory

No.	Description	Existing Sugar Factory (1,250 TCD)
1.	**Domestic**	#26
2.	**Industrial**	
	Process	*398
	Cooling make up	*80
	Boiler makeup	*120
	DM Plant	*24
	Lab & Washing	*2
	Ash Quenching	*1
	Industrial Use	*625 (100% Recycle)
3	**Green Belt**	$63
	Grand Total	688 (#26 + *625 + $63)
	Fresh Water Consumption (Norm: 100 Lit / MT of Cane Crushed)	0 Lit. / MT

Note : # Fresh water from Koyna River
Ω Treated water from ETP & STP
* Sugarcane condensate

Table 7 Details of Water Consumption in Proposed Molasses Distillery Unit
(During Sugarcane Crushing & Non- Crushing Season Days)

No.	Description	Proposed 90 KLPD		
		Molasses based		Sugarcane Syrup based
		During Crushing Season	During Non-Crushing Season	
1	**Domestic**	**#3**	**#3**	**#3**
2	**Industrial**			
	Process	♣720	♣720	--
	Cooling Makeup	270 (#166 + $37 + ♣67)	270 (#203 + ♣67)	Ø270
	Boiler Makeup	#72	#72	Ø72
	DM Plant	#15	#15	Ø15
	Lab & Washing	#5	#5	Ø5
	Ash Quenching	#2	#2	Ø2
	Industrial Use	**1084 (♣787 + #260+ $37) 76% Recycle**	**1084 (♣787 + #297) 70% Recycle**	**Ø364 100% Recycle**
3	**Green Belt**	228 ($22 + Ω206)	Ω228	Ω228
	Total (1+2)	**1315 (♣787 + #263 + $59 + Ω206)**	**1315 (♣787 + #300 + Ω228)**	**595 (Ø364 + #3 + Ω228)**
	Norm: 10 KL/KL of Alcohol	**2.8 KL/KL**	**3.3 KL/KL**	**0 KL/KL**

Note : **#** Fresh water from Koyna River **♣** Treated Water from Molasses Distillery CPU
$ Treated water from ETP, STP **Ø** Treated Water from Sugarcane Syrup Distillery CPU
Ω Harvested Rainwater

Total water requirement for existing sugar factory will be 688 M^3/D. Out of total water requirement, 625 M^3/Day will be Cane Condensate, 63 M^3/Day will be treated water from ETP, STP, fresh water will be 26 M^3/Day taken from Koyna river.
Total water required for proposed distillery unit during crushing season will be 1315 M^3/Day. Out of total water requirement, 787 M^3/Day will be treated water from CPU, 59 M^3/Day will be treated water from ETP, STP, 206 M^3/Day Harvested rainwater & 263 M^3/Day will be the fresh water taken from Koyna river.
Total water required for proposed distillery unit during non-crushing season will be 1315 M^3/Day. Out of total water requirement, 787 M^3/Day will be treated water from CPU, 228 M^3/Day Harvested rainwater & 300 M^3/Day will be the fresh water taken from Koyna river.

b. Effluent Treatment-

i) Domestic Effluent

Domestic effluent from existing sugar factory is 20 M^3/D, same is being treated separately in septic tank followed by soak pits. After implementation of distillery unit, total domestic effluent from LBDSSKL campus will be 22.5 M^3/D (Domestic effluent from sugar factory – 20 M^3/D & molasses base distillery 2.5 M^3/D). Same will be treated in proposed Sewage Treatment Plant (STP) of 25 CMD capacity and treated effluent will be reused for flushing and also used for gardening.

ii) Industrial effluent

Total trade effluent generated from existing sugar activities is 106 M^3/D. Same is treated in existing Effluent Treatment Plant (ETP) provided in own factory premises having capacity 365 M^3/D comprising of primary & secondary unit operations.

From proposed molasses distillery unit, raw spentwash about 720 M^3/D will be generated. Here, raw spentwash will be concentrated in Multi Effect Evaporator (MEE). Concentrated spentwash @ 144 M^3/D will be dried for powder formation (ATFD). Same treatment shall be given for spentwash generated from cane juice as raw material (Raw spentwash-360 CMD & conc. spentwash @ 72 CMD). This spent wash is lesser in quantity & better in quality w.r.t. pollution parameter when compared with molasses distillery spentwash.

Other effluents generated from Molasses based Distillery operation @ 839 CMD in the form spent lees @ 130 M^3/D, condensate @ 634 M^3/D (576 MEE+ 130 Dryer), cooling & boiler blow down @ 55 M^3/D and lab-wash & DM backwash @ 20 M^3/D will be treated in proposed CPU. Treated water from CPU will be reused for industrial operations, thereby achieving Zero Liquid Discharge (ZLD) for process effluent. Also, Other effluents generated from Sugarcane syrup based Distillery operation @ 471 CMD in the form spent lees @ 79 M^3/D, condensate @ 317 M^3/D (288 MEE+ 29 Dryer), cooling & boiler blow down @ 55M^3/D and lab-wash & DM backwash @ 20 M^3/D will be treated in proposed CPU. Treated water from CPU will be reused for industrial operations, thereby achieving Zero Liquid Discharge (ZLD) for process effluent.

Table 8 Effluent Generation from Existing Sugar Factory

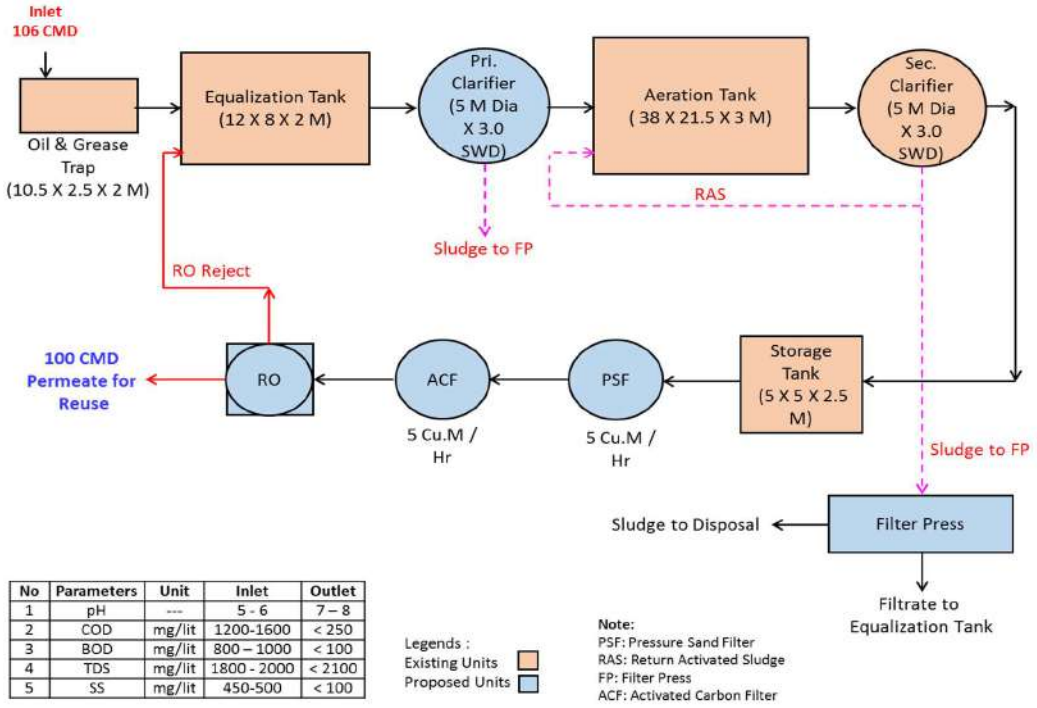
Description	Effluent (M^3/Day)	Disposal
1. Domestic	20	**Existing** - Septic tank followed by soak pit **Proposed** - Proposed STP
2. Industrial		
a)Process	48	Treated in existing ETP having primary & secondary treatment units; used for green belt in own premises
b)Cooling Blowdown	8	
c)Boiler Blowdown	24	
d)DM Backwash	2	
e)Lab & Wash Effluent	24	
Industrial Total (a+b+c+d+e)	**106**	

Table 9 Effluent Generation from Distillery Unit (Unit: M^3/D)

No.	Description	Proposed 90 KLPD		Treatment
		Molasses based	Sugarcane Syrup based	
1	**Domestic**	**2.5**	**2.5**	Proposed STP
2	**Industrial**			
	Process	Raw Spent wash – 720 Conc. Spentwash – 144 (1.6 KL/KL)	Raw Spent wash – 360 Conc. Spentwash – 72 (0.8 KL/KL)	Spent wash is concentrated in MEE. Further Conc. Spentwash shall be incinerated in Incineration Boiler **OR** dried in Dryer to form Powder.

No.	Description	Proposed 90 KLPD		Treatment
		Molasses based	Sugarcane Syrup based	
		MEE Condensate– 576 ATFD Condensate- 58 Spent Lees - 130	MEE Condensate–288 ATFD Condensate- 29 Spent Lees - 79	Other Effluents forwarded to proposed Distillery CPU. Treated effluent is fully recycled in process to achieve Zero Liquid discharge (ZLD).
	Cooling B/d	40	40	
	Boiler B/d	15	15	
	DM Backwash	15	15	
	Lab & Washing	5	5	
	Other Effluent	**839**	**471**	
	Norm: 8 KL/KL of Alcohol	1.6	0.8	

Figure 3 Flow Chart of Proposed Sugar Factory ETP



No	Parameters	Unit	Inlet	Outlet
1	pH	---	5 - 6	7 – 8
2	COD	mg/lit	1200-1600	< 250
3	BOD	mg/lit	800 – 1000	< 100
4	TDS	mg/lit	1800 - 2000	< 2100
5	SS	mg/lit	450-500	< 100

Figure 4 Flow Chart of Sugar Factory CPU (Proposed)

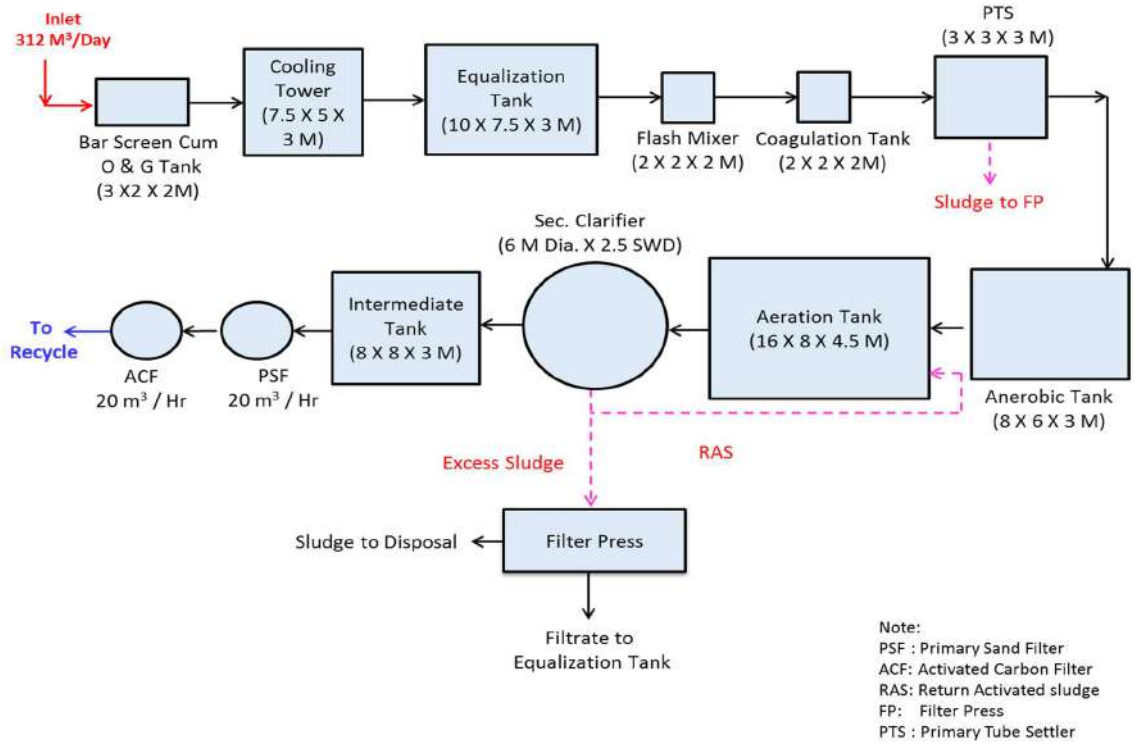


Figure 5 Process Flow Diagram of Proposed CPU for Distillery

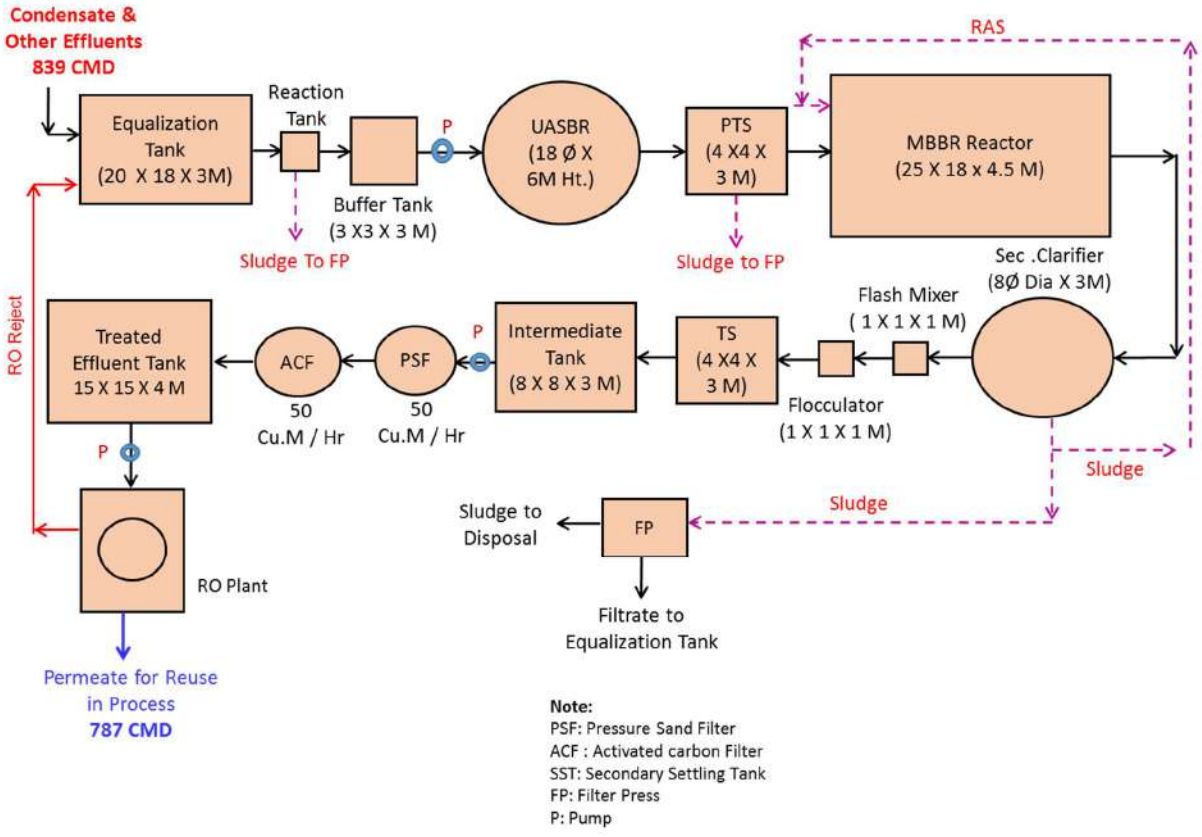
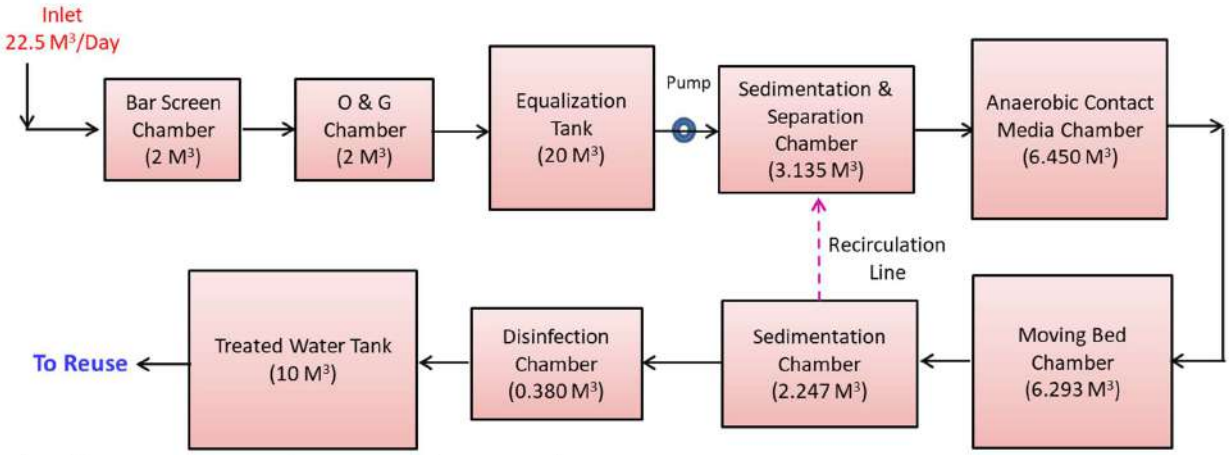
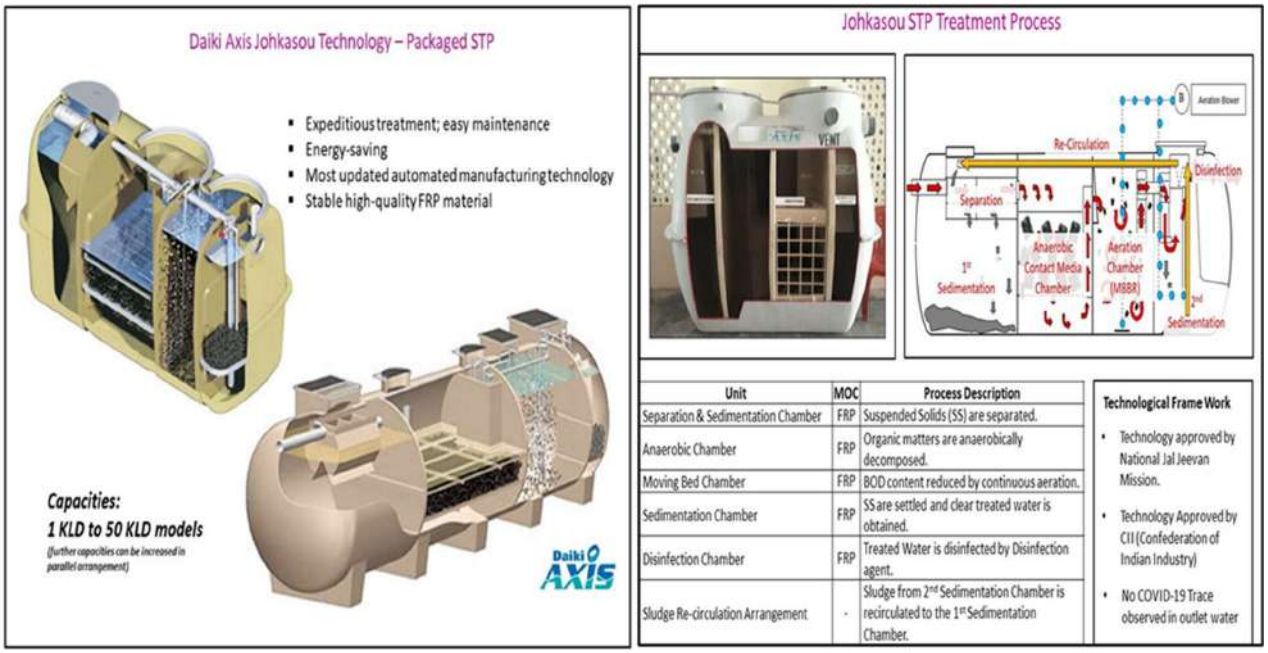


Figure 6 Flow Chart of Proposed STP



No.	Parameter	Unit	Inlet	Outlet
1	pH	---	6.0 – 8.5	6.0 – 8.5
2	COD	mg/lit	400 – 500	< 50
3	BOD	mg/lit	250 – 300	< 20
4	TSS	mg/lit	150 - 250	< 30
5	O & G	mg/lit	20 - 30	< 10

Figure 7 Process Technology of STP



Unit	MOC	Process Description
Separation & Sedimentation Chamber	FRP	Suspended Solids (SS) are separated.
Anaerobic Chamber	FRP	Organic matters are anaerobically decomposed.
Moving Bed Chamber	FRP	BOD content reduced by continuous aeration.
Sedimentation Chamber	FRP	SS are settled and clear treated water is obtained.
Disinfection Chamber	FRP	Treated Water is disinfected by Disinfection agent.
Sludge Re-circulation Arrangement	-	Sludge from 2nd Sedimentation Chamber is recirculated to the 1st Sedimentation Chamber.

B) Air Emissions

Presently, steam required for existing sugar activities is taken from boiler of 30 & 20 TPH capacity. Bagasse to the tune of 600 MT/D is used as fuel. Wet Scrubber is provided as APC. A 30 TPH boiler will be installed under proposed 90 KLPD distillery unit. Bagasse @360 MT/D will be used as fuel. ESP will be provided as APC.

Steam required for the proposed distillery activities will be taken from proposed 30 TPH boiler

There will be process emissions in the form CO_2 from Fermenters in distillery unit to the tune of 68 MT/D. Same will be collected, purified, compressed and filled in cylinders and sold for production of beverages. Details of Boilers are presented at table 11.

Table 10 Details of Boiler and Stack in LBDSSKL

No.	Description	Existing			Proposed
		Sugar & Co-gen Unit			Distillery
		Boiler		D.G. Set	Boiler
1	**Capacity (TPH)**	**30**	**20**	**165 KVA**	**30**
2	**Number**	**1**	**1**	**2**	**1**
3	Fuel type	Bagasse	Bagasse	Diesel	Bagasse
4	Fuel Qty. (MT/D)	360	240	200 lit/year	360
5	Stack Height AGL	35 M		5 M (ARL)	75
6	MOC	RCC		MS	RCC
7	Shape	Round		Round	Round
8	Diameter	2.5 M		0.3 M Each	3
9	APC Equipment	Wet Scrubber		-	ESP

C) Noise Pollution Aspect

i. Sources of Noise

i. In the distillery, very high noise generating sources would not exist. Expected noise levels in the section would be about 70 dB (A) or so. Adequate noise abatement measures like silencer & maintenance of pumps, motors, and compressors would be carried out and enclosures would be provided to abate noise levels at source. Moreover, enclosures to the machinery would be provided wherever possible.

ii. Fermentation section & distillation section would be the other minor noise generating sources. The expected noise levels in these sections would be in range of 70 to 80 dB(A).

iii. Existing sugar factory and co-gen; noise-generating sources are the boiler house, turbine rooms, cane crushing section and mill house, etc.

iv. Adequate green would be developed in phase wise manner in and around the industry. So that it would further attenuate the noise levels.

ii. Control Measures

Isolation, separation and insulation techniques to be followed, PPEs in the form of earmuffs, earplugs etc. would be provided to workers. D.G. Sets are enclosed in a separate canopy to reduce the noise levels.

D) Hazardous Wastes

Different types of hazardous wastes being generated from proposed unit alongwith disposal methods are presented in Table 12.

Table 11 Hazardous Solid Waste Generation & Disposal

No.	Category	Quantity (MT/D)	Disposal
1	5.1- Used Oil	0.012	Sale to authorized re-processor

E) Solid Wastes

Table 12 Details of Solid Waste

No.	Unit	Type	Quantity (MT/D)	Disposal
1	Distillery	Yeast Sludge	20	Used as Manure
		Boiler Ash	11	Used as Manure/ Brick Manufacturing
		CPU Sludge	0.8	Used as Manure
2	Sugar Factory & Co-gen Plant	ETP Sludge	0.1	Used as Manure
		Boiler Ash (Bagasse)	18	Used as Manure/ Brick Manufacturing

F) Odour Pollution

There are number of odour sources such as molasses handling and storage, fermentation and distillation, secondary effluent treatment, and storage of effluents, stale cane, bad mill sanitation, bacterial growth in interconnecting pipes & unattended drains. Measures adopted under existing unit for controlling same are proper housekeeping, sludge management in biological ETP units, steaming of major pipe lines, regular use of bleaching powder in the drains, efficient handling, prompt & proper disposal of press mud. Under proposed project of distillery, spentwash shall be carried through closed pipeline for spentwash storage and handling activity shall be entirely eliminated.

G) Compliance with the Norms

All the relevant acts, rules and guidelines with respect to effluent treatment and disposal, solid & hazardous wastes handling and disposal as well as in respect of emission handling and disposal, wherever applicable, as specified by the Maharashtra Pollution Control Board (MPCB) or any other concerned authority are strictly followed in the existing set up. Same practice shall be continued after proposed establishment.

H) Environmental Management Cell

EMC will be proposed by LBDSSKL, functioning under its sugar & distillery unit. Members of EMC will be well qualified and experienced in their concerned fields. EMC is as under-

Table 13 Environmental Management Cell of LBDSSKL

No.	Designation	Number (s)
1.	Managing Director	1
2.	Chief Executive Officer	1
3.	Production Manager	1
4.	Environmental Officer	1
5.	Safety Officer	1
6.	Chief Chemist	1
	Total	**06**

Details of capital as well as O & M costs towards environmental aspects under the existing sugar setup & proposed distillery are as follows –

Table 14 Capital as well as O & M Cost under Existing & Proposed Unit

No.	Description	Cost Component (Rs. Lakhs)	
		Capital	O & M / Year
A	**Existing**		
1	APC Equipment – Wet Scrubber, Stack (35 M), Ash collection system	65.0	10.0
2	Water Pollution Control - ETP & OCMS	30.0	15.0
3	Noise Pollution Control	20.0	5.0
4	Solid Waste Management	10.0	5.0
5	Occupational Health and Safety	15.0	5.0
6	Green Belt Development	40.0	5.0
7	Environmental Monitoring & Management	25.0	10.0
	Total (4% of Capital Cost)	**205.0**	**55.0**
B	**Proposed**		
	APC Equipment –ESP, Stack (75 M), CO_2 Bottling Plant & OCMS	350.0	30.0
1	Water Pollution Control – Distillery CPU, Sugar CPU, Sugar ETP Upgradation, MEE, STP & ATFD	650.0	60.0
2	Noise Pollution Control	50.0	15.0
3	Occupational Health & Safety	100.0	30.0
4	Green Belt Augmentation Plan	80.0	30.0
5	Rain Water Harvesting implementation	30.0	15.0
6	Environmental Monitoring & Management	50.0	20.0
	Total (10% of Capital Cost)	**1310.0**	**200.0**

I) Rainwater Harvesting Aspect

Rain Water Harvesting (RWH) could be of two types namely harvesting from ground and harvesting from rooftops. Quantity of harvested rainwater that becomes available during and after precipitation depends upon a number of factors such as total roof area, type of roof, area of land, nature of soil, impervious or paved areas, vegetation on the land, average annual rainfall in the region, ambient temperatures of the region etc.

RWH could be of two types namely –

1. Harvesting from ground
2. Harvesting from rooftops.

Accordingly, area consider for RWH is presented at following table – 2.30

Table 15 Area Taken for RWH

No.	Description	Area (Sq. M.)
1	Rooftop Area	75,845.00
2	Green Belt Area	92,662.68
3	Area under Roads	9,534.08
4	Parking Area	56,159.20
5	Open Space	12,090.04

Average annual rainfall in the area = 1042 mm.
= 1.04 M

Runoff Factors considered - Rooftop Area : 0.8

Green Belt	:	0.3
Road Space	:	0.5
Parking Area	:	0.5
Open Space	:	0.3

RWH = Area x Rainfall Depth x Run off Coefficient

- Total area of Plot – 2,80,796 M^2
- Total Open Area – 12,090.04M^2
- Average annual rainfall in the area = 1,042 mm

A. Roof Top Harvesting-

RWH Quantity = 55,175 M^2 X 1.04 M X 0.8
= 45,905 M^3

B. Surface Water Harvesting –

1. RWH Quantity from Green Belt = 92,662.68 M^2 X 1.04 M X 0.3
= 28,910 M^3

2. RWH Quantity from Roads = 9,534.08 M^2 X 1.04 M X 0.5
= **4,957 M^{3-}**

3. RWH Quantity from Parking = 56159.20 M^2 X 1.04 M X 0.5
= **29,202 M^3**

3. RWH Quantity from Open Space = 12,090.04 M^2 X 1.04 M X 0.3
= **3,772 M^3**

Total RWH from Surface Area = 28,910 M^3 + 4,958 M^3 + 29,203 M^3 + 3,772 M^3
= **66,843 M^3**

Hence, the total water becoming available after rooftop and land harvesting will be

Rooftop Harvesting	**+**	**Surface Harvesting**	**=**	**Total RWH**
45,905 M^3	**+**	**66,843 M^3**	**=**	**1,12,748 M^3**
			=	**112 ML**

J) The Green Belt:

The major impacts due to establishment distillery unit by LBDSSKL have been described above. Impact due to noise generation and particulate emission can be abated by plantation of green belt. Accordingly, a comprehensive green belt has already been developed in industrial campus. Further, under proposed project, augmentation of existing green belt will be done in phase wise manner. Native and fast growing species will be selected for green belt development.

1. Existing Tree Plantation

Total area available in the premises of LBDSSKL (including existing sugar factory & proposed distillery) is 28.07 Ha. As per MoEFCC norms, green belt should be developed on 33% of the total plot area of industry. Under existing setup, an area of 25,271.64 Sq. M. (2.52 Ha) is under green belt which is 9% of total plot area. There under, about 640 no. of different small & big plant species of ecologically as well as economically important have already been planted. Further, an area of 67,391 Sq. M. (6.73 Ha) will be developed under green belt in proposed project, covering 24% of total plot area.

2. Proposed Tree Plantation

A comprehensive 'Green Belt Development' programme will be implemented in a phase wise manner under proposed activities, salient features of which are as follows –

1. Tree plantation at different tiers to suit existing topography.
2. Avenue plantation along the roads and shelterbelt plantation along the peripheral fence of the plots.
3. Mass Plantation in certain pockets in the LBDSSKL campus.
4. Plantation of peculiar tree species serving typical purposes such as noise attenuation and dust suppression at selected premises.
5. Lawns and landscaped gardens in the campus.
6. To arrest dust and to attenuate noise, plantation of certain species like *Mangiferaindica* (Mango), *Sesbaniagrandiflora* (Shewarie) *Derris indica (*Karanj*)*, *Terminaliacatappa* (Indian Almond Tree), *Polyalthialongifolia (*Ashok*)* etc. shall be done.

Table 16 Area Statement of LBDSSL

No.	Description	Area (Sq.M)		
		Existing	**Proposed**	**Total**
1	**Total Plot Area**	**2,32,796**	**48,000**	**2,80,796**
2	**Total Built-up Area**			
	Sugar Factory	58,500	--	58,500
	Distillery	--	25,000	25,000
	Residential Colony	22,150	--	22,150
	Any Other Amenities	4,700	--	4,700
	Total Built-up Area	**85,350**	**25,000**	**1,10,350**
3	Area under Road	9,534.08	--	9,534.08
4	Parking Area (20%)	11,029	45130.2	**56,159.20**
5	Green Belt Area (33%)	25,271.64	67,391	**92,662.68**
6	Total Open Area	1,01,611	--	**12,090.04**

The Criteria for Proposed Greenbelt Development Plan

Emission of SPM, SO_2 is the main criteria for consideration of green belt development. Plantation under green belt is provided to abate effects of the above emissions. Moreover, there would also be control on noise from the industry to surrounding localities, as considerable attenuation would occur due to the barrier of trees provided in the green belt.

K) Socio-Economic Development

Socio economic study was carried out in 19 villages within 10 Km radius of the study area was carried out with the help of a structured close-ended interview schedule, comprising of 30 questions in Marathi. The schedule was administered by using Simple Random Disproportionate Sampling Technique. Refer Socio – economic profile in Chapter 3, Section 3.12 of EIA report for detailed information of socio-economic aspect. Observations and conclusions after the socio-economic study are as follows-

- Most of the villages have basic facilities like drinking water, preliminary educational infrastructure, toilets and electricity. Good transportation & satisfactory educational facilities are present.
- A majority of the population within the sample size had a good income which is mostly due to sugarcane cultivation.
- Indirect & direct Job opportunities provided to locals by industry.

- Most villages lacked drainage system, open drainages; scattered solid waste as well as poor sanitation was visible.
- Improper, inadequate and not within close vicinity health facilities is the major problem faced by locals.

8) ENVIRONMENTAL MONITORING PROGRAMME

Reconnaissance survey of the study area was undertaken in the month of November 2022. Field monitoring for measuring meteorological conditions, ambient air quality, water quality, soil quality and noise levels was initiated in January 2021. Report incorporates data monitored during the period from December 2022 to February 2023 and secondary data collected from various sources, which include Government Departments, related to ground water, soil, agriculture, forest etc.

a. Land Use

Land use study requires data regarding topography, zoning, settlement, industry, forest, roads & traffic etc. The collection of this data was done from various secondary sources viz, Census books, Revenue records, State and Central Government Offices, Survey of India Toposheets as well as high resolution satellite image and through primary field surveys.

b. Land Use/ Land Cover Categories of Study Area

Table 17 Land Use/ Land Cover

No.	Classes	Area		Remark
		(Ha.)	%	
1	Built Up Area	1396	4.44	Built Up Area covers about 4.44% of area within 10km radius of study area. The surrounding villages around the project site are well developed with road electricity and water.
2	Crop Land	9693	30.85	Most of the land use within the 10 km radius buffer is crop land. The mining land covers about 30.85% area.
3	Fallow Land	4435	14.12	Fallow land that covers about 14.12% area within 10km radius buffer. This fallow land is because of changing of crop type and leaving the land uncultivated to get fertile. Some of the fallow land is seen because of hilly region where there is lack of continuous water supply.
4	Water Bodies/River	542	21.00	There are very few water bodies in the study area and contributes to 21% of area within 10km radius from the plant site. This is the main cause for relatively high crop land in the study area.
5	Barren Land	6597	1.73	Most of the land use within the 10 km radius buffer is crop land. The crop land covers about 1.73% area.
6	Scrub Land	5436	17.30	Most of the land use within the 10 km radius buffer is crop land. The mining land covers about 17.30% area.
7	Forest	3316	10.56	There are few reserved forest patches in the study area and contributes to 10.56% of area within 10km radius from the plant site.
	Total	**31415**	**100.0**	

c. Meteorology

Methodology adopted for monitoring surface observations is as per the norms laid down by Bureau of Indian Standards (BIS) and the India Meteorology Department (IMD). On-site monitoring was undertaken for various meteorological variables in order to generate the data. Further, certain secondary meteorological data like temperatures, relative humidity, rainfall intensity etc. have been taken from IMD, Satara.

Meteorological parameters were monitored during the period December 2022 to February 2023. Details of parameters monitored, equipments used and the frequency of monitoring have been given in Chapter 3 of the Draft EIA report.

d. Air Quality

This section describes selection of sampling locations, includes methodology of sampling and analytical techniques with frequency of sampling. Presentation of results for December 2022 to February 2023 survey is followed by observations. All the requisite monitoring assignments, sampling and analysis was conducted through the laboratory - M/s. Green Envirosafe Engineers & Consultant Private Limited, Pune. Lab has received NABL accreditation and has been approved by MoEFCC; New Delhi. Further, it has also received ISO 9001:2008, ISO 14001:2004OHSAS 18001–2007 certifications by DNV. Ambient air monitoring was conducted in the study area to assess the quality of air for PM_{10}, $PM_{2.5}$, SO_2, NO_x and CO. The various monitoring stations selected are shown in following table.

Table 18 Ambient Air Quality Monitoring (AAQM) Locations

No.	Location	Direction From Site	Distance (Km)	Direction
A1	Industrial Site	--	---	---
A2	Kasrund	Upwind	5.78	W
A3	Sulewadi		6.68	W
A4	Paparde	Downwind	4.79	E
A5	Sonaichiwadi		2.35	E
A6	Lugadewadi	Crosswind	4.04	N
A7	Dhebewadi		5.89	S
A8	Marali	Nearest Habitat	1.40	S

Table 19 Summary of the AAQ Levels for Monitoring Season [December-2022-January-February-2023]

		Location							
		Industrial Site	**Kasrund**	**Sulewadi**	**Paparde**	**Sonaichiwadi**	**Lugadewadi**	**Dhebewadi**	**Marali**
PM_{10} µg/M³	**Max**	66.9	64.9	58.4	65.0	67.3	66.8	64.5	68.3
	Min	58.9	51.0	53.3	54.7	58.1	53.1	53.0	57.7
	Avg	65.0	54.4	56.2	60.6	62.0	59.2	57.0	63.7
	98% Percentile	66.9	61.8	58.3	64.8	66.7	66.1	64.5	67.9
$PM_{2.5}$ µg/M³	**Max**	29.1	18.1	18.9	22.8	25.3	21.8	21.1	26.7
	Min	19.6	12.7	13.3	18.3	20.2	16.7	14.3	20.5
	Avg	25.0	15.9	16.2	20.7	22.5	19.1	17.5	23.8
	98% Percentile	28.7	18.1	18.7	22.7	25.3	21.6	20.9	26.5
SO_2 µg/M³	**Max**	19.8	13.1	13.0	18.7	19.8	15.2	16.5	19.2
	Min	13.8	7.7	6.9	13.0	14.8	10.4	11.2	13.1
	Avg	17.8	11.5	10.2	16.2	17.5	12.9	14.0	16.6
	98%	19.8	13.0	12.5	18.7	19.8	15.2	16.5	18.6

		Location							
		Industrial Site	Kasrund	Sulewadi	Paparde	Sonaic hiwadi	Lugad ewadi	Dheb ewadi	Marali
	Percentile								
NOx µg/M³	Max	29.1	19.3	16.9	24.9	24.9	22.3	20.4	25.4
	Min	24.0	15.0	12.6	19.2	21.3	18.2	15.1	22.5
	Avg	26.3	17.4	15.0	22.0	23.4	20.4	18.0	24.3
	98% Percentile	28.5	19.0	16.9	24.7	24.9	22.1	20.3	25.4
CO mg/M³	Max	0.800	0.030	0.030	0.030	0.030	0.030	0.030	0.030
	Min	0.300	0.010	0.010	0.010	0.010	0.010	0.010	0.010
	Avg	0.550	0.013	0.014	0.015	0.014	0.017	0.017	0.019
	98% Percentile	0.800	0.025	0.025	0.030	0.025	0.030	0.030	0.030

Notes: PM_{10}, $PM_{2.5}$, SO_2 and NO_x are computed based on 24 hourly values, CO is computed on hourly values

Table 20 National Ambient Air Quality Standards (NAAQS) by CPCB

(Notification No. S.O.B-29016/20/90/PCI-L by MOEFCC; New Delhi dated 18.11.2009)

		Zone Station	
		Industrial, Residential, Rural & Other Area	Ecologically Sensitive Area
PM_{10} (µg/M³)	24 Hr	100	100
	A.A.	60	60
$PM_{2.5}$ (µg/M³)	24 Hr	60	60
	A.A.	40	40
SO_2 (µg/M³)	24 Hr	80	80
	A.A.	50	20
NOx (µg/M³)	24 Hr	80	80
	A.A.	40	30
CO (mg/M³)	8 Hr	2	2
	1 Hr.	4	4

Note: A.A. represents Annual Average

e. Water Quality

Sampling and analysis of water samples for physical, chemical and heavy metals were also undertaken through the laboratory of Green Enviro Safe Engineers & Consultant Pvt. Ltd, Pune. Eight locations for surface water and Eight locations for ground water were selected. Same are listed below

Table 21 Monitoring Locations for Ground Water

Station	Geographical Locations	Distance from Site (Km)	Direction from Site
GW1	17°18'42.58"N, 73°57'16.42"E	0.81	S
GW2	17°18'51.58"N, 73°57'31.59"E	0.72	SSE
GW3	17°19'05.68"N, 73°57'31.11"E	0.47	E
GW4	17°19'47.85"N, 73°58'06.12"E	1.91	NE
GW5	17°19'56.48"N, 73°57'08.13"E	1.48	NNW
GW6	17°19'09.29"N, 73°57'06.66"E	0.26	W
GW7	17°19'16.24"N, 73°56'21.80"E	1.60	W
GW8	17°18'54.33"N, 73°56'52.89"E	0.80	SW

Table 22 Monitoring Locations for Surface Water

Station	Station Location	Distance (Km)	Direction	Justification
SW1	Marali	0.40	SSW	Upstream of Nala
SW2	Chopdarwadi	0.68	NNW	Downstream of Nala
SW 3	Shindewadi	4.22	W	Upstream of Nala
SW 4	Gavhanwadi	1.42	NW	Downstream of Nala
SW 5	Sangwad	1.75	NNW	Stream-Nala Confluence
SW 6	Yerphale	4.53	NNW	Upsteram of Koyna River
SW 7	Sangwad	1.85	NNE	Midstream of Koyna River as well as Nala-River Confluence
SW 8	Paparde	3.63	ENE	Downstream of Koyna River

Results observed after monitoring ground water locations and surface water locations are mentioned in Chapter 3 of the EIA report.

f. Noise Level Survey

Study area of 10 Km radius with reference to the proposed project site has been covered for noise environment. The four zones viz. Residential, Commercial, Industrial and Silence Zones have been considered for noise monitoring. Some of the major arterial roads were covered to assess the noise due to traffic. Noise monitoring was undertaken for 24 hours at each location. The details of noise monitoring stations are given in following table

Table 23 Noise Sampling Locations

Station	Station Location	Distance (Km)	Direction
N1	Site	-	-
N2	Sidheswarnagar	0.5	N
N3	Paparde	3.8	E
N4	Divshi	4.1	SE
N5	Marli	1.4	SW
N6	Sonavde	3.1	SW
N7	Belvade Khurd	3	NW
N8	Navrastha	3.4	NE

Table 24 Ambient Noise Levels

No.	Location	Average Noise Level in dB(A)					
		L_{10}	L_{50}	L_{90}	$L_{eq(day)}$	$L_{eq(night)}$	L_{dn}
1	Project Site	55.6	60.6	62.8	67.8	55.3	67.0
2	Sidheshwarnagar	44.6	46.3	47.8	51.8	41.2	51.6
3	Paparde	44.5	45.6	47.9	51.2	40.4	50.9
4	Divshi	44..8	46.5	47.8	52.3	41.0	51.8
5	Marli	44.9	46.7	47.9	51.7	42.0	51.8
6	Sonavde	43.6	46.5	47.4	51.3	42.2	51.7
7	Belvale Khurd	44.4	46.9	47.8	52.6	41.8	52.3
8	Navrastha	44.2	46.7	48.3	52.1	42.0	52.1

g. Socio-Economic Profile

Survey of 19 villages within 10 Km study area of LBDSSKL, taking the reference of census 2011. Survey was carried out with the help of a Simple Random Disproportionate Sampling

and Snowball Technique, comprising of 30 questions in Marathi. Chapter 3 may be referred for details of this aspect.

h. Ecology

Field survey was carried out according to random sampling method for flora, and opportunistic sighting method and standard point count method for fauna were followed. In general, visual observation and estimation method was used for qualitative study of the biota. Birds and fish were studied being good indicators of local environmental change. Flora, mainly major tree species, was focused on identification and species abundance.

9) ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

A. Impact on Topography

No major topographical changes are envisaged in the acquired area as it is expansion of Distillery project. In acquired area, the changes would be due to the manmade structures, like Distillery structure and ancillary units. Industrial activity would invite positive benefits in the form of land leveling and tree plantation in the plant vicinity and other premises.

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B. Impact on Climate

Impact on the climate conditions due to the expansion activity is not envisaged, as emissions to the atmosphere, of flue gases with very high temperatures are not expected.

C. Impact on Air Quality

A study area of 10 km radius is considered for determination of impacts.

i. Baseline Ambient Air Concentrations

24 hourly 98th percentile concentrations of PM_{10}, $PM_{2.5}$, SO_2 and NOx in Ambient Air, recorded during the field study conducted for the season December 2022- January-February-2023 are considered as baseline values. They represent impact due to operations of existing nearby industries on this region. Existing baseline concentrations are summarized in following table and the GLC of the same is included in 4th chapter of EIA report.

Table 25 Baseline Concentrations (98 Percentile)

Parameter	PM_{10}	$PM_{2.5}$	SO_2	NO_X	CO
Conc. (µg/m^3)	65.0	25.0	17.8	26.3	0.55
NAAQS	100 µg/m^3	60 µg/m^3	80 µg/m^3	80 µg/m^3	4mg/m^3

ii. Air Polluting Sources

A new 30 TPH boiler will be installed for the proposed expansion project. An Existing Boilers of capacity 30 & 20 TPH is utilized for existing Sugar Factory. Existing DG set of capacity 165 KVA will be used for proposed project.

D. IMPACT ON WATER RESOURCES

i. Impact on Surface Water Resources & Quality

Total water requirement of for existing & proposed activity taken from Koyna River.

Effluent from distillery; Raw Spentwash shall be primarily treated in Multi Effect Evaporator (MEE). Concentrated spentwash shall be dried in Dryer to form powder. Other Effluents viz. spent lees, Boiler blow down, cooling tower, and lab; washing, DM backwash is forwarded to CPU. Treated effluent shall be used in process to achieve ZLD. Total domestic effluent would be treated in proposed STP. Hence there will not be any impact on surface water resource.

ii. Impact on Ground Water Resources & Quality

Requirement for fresh water will be met from Koyna river. NOC is procured from Koyna irrigation department; Koynanagar. Moreover, there will not be any discharge of untreated effluent so there will not be any impact on ground water level and quality.

E. IMPACT ON SOIL

Impact on the soil characteristics is usually attributed to air emissions, wastewater discharges and solid waste disposal. Under existing sugar factory as mentioned above, there will not be discharge of any untreated effluent on land. ESP are installed to existing boilers. Boiler ash from existing boiler is utilized for brick making. Hence, there will not be any major increase in chemical constituents of soil through deposition of air pollutants/ discharge of waste water. Moreover, there will not be any process emissions worth mentioning, the impact on the soil characteristics will be nil.

F. IMPACT ON NOISE LEVELS

Workers could get annoyance and can lose concentration during operation. It can cause disturbance during working. People working near the source need risk criteria for hearing damage while the people who stay near the industry need annoyance and psychological damage as the criteria for noise level impact analysis. LBDSSKL is not major noise producing industry. There shall be no any prominent effect due to vibration at the project site.

G. IMPACT ON LAND USE

Present use of the project land is Industrial wherein the sugar factory, Co-gen Plant, Acetic Acid Plant & Distillery have already been established. Proposed expansion project would be implemented in existing premises LBDSSKL. Hence no change in the land use pattern is expected. Therefore the impact on land use is non-significant.

H. IMPACT ON FLORA AND FAUNA

Discharge of untreated wastewater from the industry in surrounding area can also cause significant environmental impact on the aquatic habitats and affect dependent biodiversity. In case of air pollution, industry is going to contribute in SPM pollution load in nearby area. This may have negative impact particularly on avifauna, surrounding crop yields & local population. Details in respect of impacts on ecology and biodiversity are described in Chapter 3.

I. IMPACT ON HISTORICAL PLACES

Ramghal is at 7.5 Km. No major impact was observed during site visit.

10) SALIENT FEATURES OF EMP

Following routine monitoring program as detailed in Table 27 shall be implemented at site. Besides to this monitoring, the compliances to all Environmental Clearance conditions and regular permissions from CPCB /MoEFCC shall be monitored and reported periodically.

Table 26. Plan for Monitoring of Environmental Attributes in and around LBDSSKL

No.	Description	Location	Parameters	Frequency	Conducted by
1	Ambient Air Quality	Upwind-1, Downwind-2 (Near Cane Yard, Near Main ETP, Near Alcohol Plant)	PM_{10}, $PM_{2.5}$, SO_2, NOx, CO	Monthly	MoEFCC and NABL Approved External Lab
		Study area - Industrial Site, Kasrund, Sulewadi, Paparde, Sonaichiwadi, Lugadewadi, Dhebewadi & Marali		Quarterly	
2	Work Zone Air Quality	5 Locations (Mill section, Boiler area, Fermentation section, Sugar bagging section)	PM_{10}, $PM_{2.5}$, SO_2, NOx, CO	Monthly	
3	Fugitive Emissions	Ethanol storage area & Distillation column, Bagasse yard	VOCs & PM_{10}, $PM_{2.5}$	Monthly	
4	Stack Emissions	Boiler – 2 Nos., D.G. Sets – 1 No.	SPM, SO_2, NOx	Monthly	
5	Ambient Noise	5 Locations - (Near Main Gate, Near ETP, Near Sugar Godown, Near Cane Yard, Admin Office)	Spot Noise Level recording; Leq(n), Leq(d), Leq(dn)	Monthly	
		Study area - 8 villages within 10 Km study area- Project Site, Sidheswarnagar, Paparde, Divshi, Marali,Sonavade, Belvade Khurd, Navrastha		Quarterly	
	Work zone Noise	Within Premises – 5 Nos. (Mill section, D.G. Sets, Co-gen Area, Boiler Section, ETP)		Monthly	
6	Effluent	• Treated • Untreated	pH, SS, TDS, COD, BOD, Chlorides, Sulphates, Oil & Grease.	Monthly	
7	Drinking water	Factory canteen / Residential Colony	Parameters as per drinking water Std IS:10500	Monthly	
8	Soil	8 locations within 10 Km study area	pH, Salinity, Organic Carbon, N, P, K	Quarterly	
9	Water Quality (Ground Water & Surface Water)	Locations in study area – i. Surface Water - 8 locations ii. Ground Water - 8 locations	Parameters as per CPCB guideline for water quality monitoring – MINARS/27/2007-08	Quarterly	
10	Waste management	Implement waste management plan that identifies & characterizes every waste associated with proposed activities & which identifies procedures for collection,	Records of Solid Waste Generation, Treatment and Disposal will be maintained	Twice in a year	By LBDSSKL

No.	Description	Location	Parameters	Frequency	Conducted by
		handling & disposal of each waste arising.			
11	Emergency Preparedness such as fire fighting	Fire protection and safety measures to take care of fire and explosion hazards, to be assessed and steps taken for their prevention.	On site Emergency Plan, Evacuation Plan, fire fighting mock drills	Twice a year	By LBDSSKL
12	Health Check up	Employees and migrant labour health check ups	All relevant health check up parameters as per factories act.	Once in a Year	By LBDSSKL
13	Green Belt	Within Industry premises as well as nearby villages	Survival rate of planted sapling	In consultation with DFO	By LBDSSKL
14	CER	As per requirement	--	Six Monthly	By LBDSSKL

11) ADDITIONAL STUDIES & INFORMATION

Risks Assessment

Risk to human health is inherent. It is safe only when the installation is dismantled at the end of its useful life. The following principles should be used as guidelines for the selection of risk criteria -

1. Increase in risk, caused by the presence of the plant to local community (i.e. neighboring public) should be negligible in comparison to the risk they already have in their daily life.
2. Work force on the plant should be expected to accept a potentially greater risk than the members of the local community since the work force have been trained to protect themselves from the possible hazards and thus reducing the actual risk to themselves.

The risk criteria considered by Green A.G. (1982) are given as below:

1. Risk to Plant: This risk is to be given priority only when it is proved beyond doubt that the risk to life is so low that reducing this risk may not be justified. Under this consideration, the risk to economic damage may be considered.
2. Risk to Public and Employees: Scale used for risk to employee and public is Fatal Accident Rate (F.A.R.) or more commonly Fatal Accident Frequency Rate. (F.A.F.R.). F.A.R. and F.A.F.R. is defined as number of deaths from industrial injury expected in a group of 1000 men during their working period.

Mitigation Measures

It is necessary to take following mitigation measures to prevent bursting of tanks, and heavy leakage and loss of life.

1. Molasses should be stored in good quality and leak proof mild steel tanks.
2. Adequate safety factor should be incorporated into the design of wall thickness considering deterioration that will occur due to corrosion over a period of time.
3. Regular internal and external inspection should be scheduled for checking wall thickness of the tanks. Dyke/ Bund walls should be constructed around the tank or tanks.
4. It must be ensured while finalizing the dyke dimensions and that thickness that clear volume inside the dyke walls is equal or more than 1.2 x volume of tank storage capacity.
5. Continuous mixing of molasses through external pump circulation should be done.
6. If there is increase in temperature beyond 30^0C external cooling of tanks shall be provided by heat exchanger in the circulation line.
7. Frequent Temperature monitoring, manually or by recorder is strongly advised.

If there is leakage –

a. Leakage should be washed out and diluted & should be recycled as far as possible or must be properly treated in Effluent treatment plant.
b. Replacing of leaky gaskets, joints, should be done strictly by following work permit system.
c. Leakage of pipelines, welding repairs should be attended/ carried out outside the plant. The necessary hot work permit should be issued after taking necessary precautions & firefighting measures for onsite hot work, by the concerned authority before any hot work in undertaken
d. Leakage through pump gland shall be reduced to the minimum by installing mechanical seals.
e. To attend all major leakage in tanks the following procedure should be followed –
   (i) Transfer the material to another tank.
   (ii) Prepare the tank for welding repairs by making sure that it is positively isolated with blinds from other vessels and ensuring that it is free of the chemicals & gases by purging air and carrying out air analysis before any hot work is undertaken & this should be done by skilled workers. For this purpose, safety permit should be given.

लोकनेते बाळासाहेब देसाई सहकारी साखर कारखाना लिमिटेड
(लो.बा.दे.स.सा.का.लि.)
दौलतनगर मरळी, ता. पाटण जि. सातारा, महाराष्ट्र राज्य
यांच्या
प्रस्तावित ९० के.एल.पी.डी.मोलॅसिस (बी ए सी)/ केन ज्युस वर आधारित आसवनी
प्रकल्प संदर्भातील इन्व्हायरमेंट इंपॅक्ट असेसमेंट अहवालाचा सारांश

१)<u>प्रकल्पाविषयी थोडक्यात</u>

लोकनेते बाळासाहेब देसाई सहकारी साखर कारखाना लिमिटेड (लो.बा.दे.स.सा.का.लि.) यांचा प्रकल्प गट क्र. १३३/१/ब, १३३/२/ब, १३४, १३५/३/ब, १३५/५, १४९/१, १४९/३, १५१, १६०/१२, १६०/१८, १६०/३, १६०/७, १३२, १३३/१/अ, १४९/२, १६०/११, १६०/२, १६०/४, १६०/९, १३१/१, ३, ६, ७, ८, ९, १०, ११, १२, १३, १४, १५ पो. दौलतनगर मरळी, ता. पाटण जि. सातारा, महाराष्ट्र राज्य येथे उभारणेत आलेला आहे. प्रस्तावित ९० कि.लि.प्रतिदिन क्षमतेचा मोलॅसिस (बी ए सी)/ केन ज्युसवर आधारित आसवनी प्रकल्प सध्याच्या १२५० टन प्रतिदिन गाळप क्षमतेचा साखर कारखाना प्रकल्पाच्या आवारात उभारण्यात येणार आहे.

सदर प्रकल्प हा दि. १४.०९.२००६ च्या इन्वायरमेंन्ट इम्पॅक्ट असेसमेंन्ट (EIA) नोटीफिकेशन नं. स. ओ. १५३३ (ई) च्या १३ जून २०१९ च्या नोटीफिकेशन मधील तरतुदीनुसार श्रेणी 'ब १' मध्ये येतो. यानुसार, पने, पर्यावरण व हवामान बदल मंत्रालय, नवी दिल्ली यांच्याकडे फॉर्म १ ॲप्लिकेशन जमा केला आहे व स्टॅंडर्ड ToR's मंजुर झाले आहेत. प्रस्तावित प्रकल्प राबविताना सुरक्षिततेचे नियम व पर्यावरणाचे संरक्षण करण्याच्या सर्व गोष्टींची खबरदारी घेतली जाईल.

खालील तक्त्यामध्ये गुंतवणुकीचे तपशील दिलेले आहेत.

तक्ता क्र. १ गुंतवणुक

क्र	विभाग	भांडवली गुंतवणुक (रू. करोडमध्ये)		
		सध्याची	प्रस्तावित	एकुण
१	साखर कारखाना	४७.२३	--	४७.२३
२	आसवनी प्रकल्प	--	१३०	१३०
	एकुण	४७.२३	१३०	१७७.२३

तक्ता क्र. २ कामकाजाचा कार्यकाळ

क्र	विभाग	ऑपरेशनचे दिवस (नं.)		
		हंगाम	बंद हंगाम	एकुण
१	साखर कारखाना	१८०	--	१८०
२	आसवनी प्रकल्प	१८०	१५०	३३०

२) <u>प्रकल्पाची जागा</u>

लो.बा.दे.स.सा.का.लि.द्वारा दौलतनगर मरळी, ता. पाटण जि.सातारा, महाराष्ट्र राज्य येथे २८.०७ हेक्टर एवढी जागा संपादित करणेत आली आहे. सदर जागेमध्येच आसवनी प्रकल्प उभारण्यात येणार आहे.
जागेचा ले-आऊट प्लॅन **ॲपेन्डीक्स - अ** येथे जोडला आहे. जागेसंदर्भातील माहिती खालीलप्रमाणे आहे.

तक्ता २ विविध विभागांच्या क्षेत्राचा तपशील(चर्ग.मी)

क्र.	तपशील	क्षेत्र (चर्ग.मी)		
		अध्याची	प्रस्तावित	एकूण
१	**एकुण क्षेत्र**	२,३२,७९६	**४८,000**	२,८0,७९६
२	बांधकाम क्षेत्र			
	i. साखर कारखाना	५८,५00	--	५८,५00
	ii. आसवनी प्रकल्प	--	२५,000	२५,000
	iii. कॉलनी	२२,१५0	--	२२,१५0
	iv.इतर क्षेत्र	४,७00		४,७00
	एकूण	**८५,३५0**	२५,000	**१,१0,३५0**
३	हरित पट्टा	२५,२७१.६४	६७,३९१	९२,६६२.६८
४	रस्ता क्षेत्र	९,५३४.0८	--	**९,५३४.0८**
५	पार्किंग क्षेत्र	११,0२९	४५,१३0.२	५६,१५९.२0
६	एकुण खुले क्षेत्र	१,0१,६११	--	**१२,0९0.0४**

३) <u>प्रकल्प प्रवर्तकांची ओळख</u>

लो.मा.दे.स.सा.का.लि. च्या प्रवर्तकांना साखर कारखाना व आसवनी प्रकल्प क्षेत्रामधील चांगला अनुभव आहे. प्रवर्तकांनी प्रकल्प नियोजन तसेच अंमलबजावणी योजनेचा सखोल अभ्यास केला आहे. प्रकल्प प्रवर्तकांचे नाव आणि हुद्दा खालीलप्रमाणे -

तक्ता ३ प्रवर्तकांचे नाव व हुद्दा

क्र.	प्रवर्तकाचे नाव	हुद्दा
१	श्री. यशराज शंभूराज देसाई	अध्यक्ष
२	श्री. पांडुरंग आण्णासो नलवडे	उपाध्यक्ष
३	श्री. सुहास देसाई	व्यवस्थापकीय संचालक

४) <u>उत्पादनांविषयी माहिती</u>

लो.मा.दे.स.सा.का.लि. यांच्या अध्याच्या साखर कारखाना तसेच प्रस्तावित आसवनी प्रकल्पामधून तयार होणारी उत्पादने व त्यांचे परिमाण खालीलप्रमाणे आहे.

तक्ता क्र.४ साखर कारखाना आणि आसवनी प्रकल्पांची उत्पादने

प्रकल्प	उत्पादने व उपउत्पादनांची नावे	क्षमता
आसवनी (९0 के.एल.पी.डी.)	रेक्टीफाइड स्पिरिट(आर.एस.) / एक्स्ट्रा न्युट्रल अक्लोहोल(इ.एन.ए.) / इथेनॉल	९0 कि. लि./दिन
	उपउत्पादने	
	फ्युजेल ऑईल	0.१८ मे.टन/दिन
	CO_2	६८ मे.टन/दिन
	स्पेंटवॉश पावडर	७२ मे.टन/दिन
***साखर कारखाना (१२५0 टन /दिन)**	साखर(११-१२%)	१६२.५ मे.टन/दिन
	उपउत्पादने	
	बगॅस(३२%)	३७५ मे.टन/दिन
	प्रेसमड(३.५%)	५0 मे.टन/दिन
	मोलॅसिस(४-५%)	५0 मे.टन/दिन

NOTE- *: मूल्य वैध CTO नुसार.

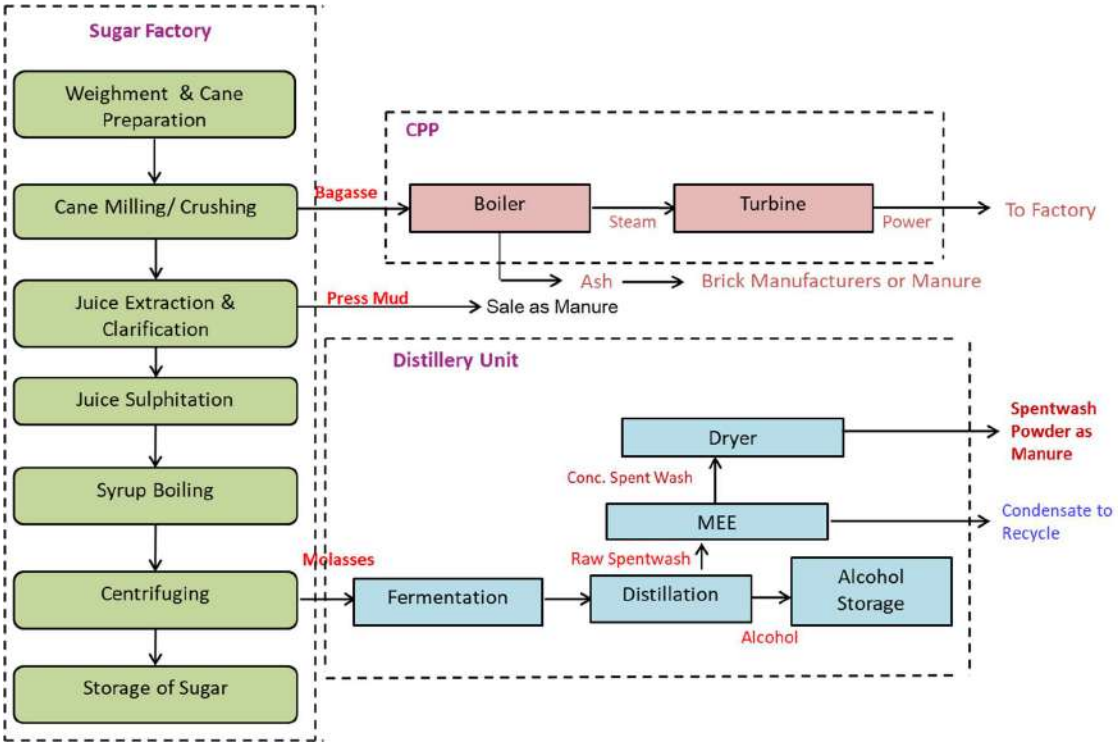
साखर कारखाना तसेच आसवनी संदर्भातील उत्पादन प्रक्रिया आणि प्रवाह तक्ता (फ्लो चार्ट) आकृती १ मध्ये दिला आहे.

५) प्रकल्पाचे उद्दिष्ट

- साखर उद्योग हा देशातील दुसरा सर्वात मोठा शेती आधारित उद्योग आहे.
- साखर उद्योग हा रोजगार निर्मिती, उत्पन्न निर्मिती आणि कार्यक्षेत्रामध्ये पायाभुत घटक तयार करण्यासाठी महत्वपूर्ण आहे.
- अल्कोहोलयुक्त पेयांच्या उत्पादनांसाठी ऊसरस, मोलॅसिस, कडधान्ये व इतर कृषी उत्पादने आसवनी उद्योग वापरतो. जगभर वापरल्या जाणा-या फरमेंटेड व डिस्टीलड पेयांचे उत्पादन स्थानिक उत्पादित व उत्तम वातावरणीय परिस्थितीत वाढलेल्या कच्या मालांवर आधारित आहे. इथिल अल्कोहोल हे फरमेंटींग मोलॅसिस पासून तयार केले जाते. मोलॅसिस हे साखर कारखान्यामधुन मिळते.
- अल्कोहोल उद्योगाची देशाच्या अर्थव्यवस्थेमधे महत्वाची जागा आहे. अल्कोहोल हे खुप रसायनांमध्ये कच्चा माल म्हणुन वापरले जाते. त्याबरोबरच या व्यवसायामुळे सरकारला मोठया प्रमाणात अबकारी कर वसुल होतो.
- पेट्रोलबरोबर अल्कोहोलचे ब्लेंडींग केलेस पॉवर अल्कोहोल यास्वरूपात अल्कोहोल मध्ये इंधन म्हणुन क्षमता आहे.
- तसेच जपान, यु.एस.ए., कॅनडा, श्रीलंका, इ. देशांमध्ये पेट्रोलियम क्रुड पासुनच्या नॅप्थापासुनचे सिंथेटिक अल्कोहोल ब्रिव्हरेजीससाठी उपयुक्त नसलेने या देशांमधे फरमेंटेड अल्कोहोलला खुप मोठया प्रमाणामध्ये मागणी आहे.

६) उत्पादन प्रक्रिया

आकृती १ उत्पादन प्रक्रिया



७) पर्यावरणविषयक दृष्टिकोन

लो.मा.दे.स.सा.का.लि.यांनी अत्यंतप्रभावी व परिणामकारक अशी पर्यावरण व्यवस्थापन योजना (EMP) राबविणेचे नियोजन केले आहे. त्यातील विविध घटक खालीलप्रमाणे आहेत.

अ) पाण्याचा वापर, सांडपाण्याची निर्मिती व त्याची प्रक्रिया

- **पाण्याचा वापर**

लो.मा.दे.स.सा.का.लि.यांच्या सध्याच्या व प्रस्तावित प्रकल्पामध्ये होणा-या पाण्याच्या वापराविषयी सविस्तर तपशील खालीलप्रमाणे -

तक्ता क्र.५ साखर कारखाना प्रकल्पासाठी पाण्याचा वापर

क्र.	तपशील	पाण्याची गरज (घनमीटर/दिन)
१.	**घरगुती**	#२६
२.	**औद्योगिक**	
	i. प्रोसेस	*३९८
	ii. कुलिंग	*८०
	iii. बॉयलर मेकअप	*१२०
	iv. डी.एम. प्लांट	*२४
	v. वॉशिंग	*२
	vi. ब्रॅश क्वेंचिंग	*१
	एकूण औद्योगिक वापर	*६२५(१००% पूर्णवापर)
३.	**बागकाम**	$६३
	एकूण	६८८ (#२६+*६२५+ $६३)

टीप # एकुण पाणी जे कोयना धरणामधुन वापरले जाइल * ऊसामधील कंडेनसेट
$ एस.टी.पी. व ई.टी.पी. मधुन प्रक्रिया केलेले पाणी

तक्ता क्र.६ प्रस्तावित मोलॅसिस व ऊसाचा रस आसवनी प्रकल्पासाठी पाण्याचा वापर

क्र.	तपशील	पाण्याची गरज (घनमीटर/दिन)		ऊसाचा रस
		ऊस गळित हंगाम दरम्यान	विना ऊस गळित हंगाम	
१.	घरगुती	#३	#३	#३
२.	औद्योगिक			
	i. प्रोसेस	♣७२०	♣७२०	--
	ii. कुलिंग	२७० (*१६६ +$ ३७ +♣ ६७)	२७०(#२०३ +♣ ६७)	Ø२७०
	iii. बॉयलर मेकअप	#७२	#७२	Ø७२
	iv. डी.एम. प्लांट	#१५	#१५	Ø१५
	v. लॅब व वॉशिंग	#५	#५	Ø५
	vi. ब्रॅश क्वेंचिंग	#२	#२	Ø२
	एकूण औद्योगिक वापर	**१०८४(♣ ७८७+ #२६० + $३७) ७६%पूर्णवापर**	**१०८४ (♣७८७ + # २९७) ७०%पूर्णवापर**	**Ø३६४ १००%पूर्णवापर**
३.	**हरितपट्टा**	२२८($२२ + Ω२०६)	Ω२२८	Ω२२८
	एकूण	**१३१५(♣७८७ + #२६३ + $५९ + Ω२०६)**	**१३१५(♣७८७ + #३०० + Ω२२८)**	**५९५(Ø३६४ + #३+ Ω228)**
	ताज्या पाण्याचा वापर (प्रमाण १० कि.लि./ कि.लि. अल्कोहोल)	२.८ कि. लि.	३.३ कि. लि.	० कि. लि.

टीप : #: एकुण पाणी जे कोयना धरणामधुन वापरले जाइल, ♣: मोलॅसिस बी.पी.यू मधून प्रक्रिया केलेले पाणी, $: एस.टी.पी. व ई.टी.पी. मधुन प्रक्रिया केलेले पाणी, Ø: ऊसाचा रस बी.पी.यु मधील प्रक्रियाा केलेले पाणी, Ω: बेनवॉटर हार्वेस्टिंग

ब. सांडपाणी प्रक्रिया

१. घरगुती सांडपाणी

लो.मा.दे.स.सा.का.लि.प्रकल्पामधील साखर कारखाना आणि आसवनी प्रकल्पामधुन २२.५ घनमीटर प्रतिदिन घरगुती सांडपाणी तयार होते. सध्या तयार होणारे घरगुती सांडपाणी हे सेप्टीक टँक नंतर शोकपीट मध्ये प्रक्रिया केले जाते. आसवनी प्रकल्प उभारणी नंतर एकुण घरगुती सांडपाणी; प्रस्तावित घरगुती सांडपाणी प्रक्रिया प्रकल्पामध्ये (एस.टी.पी.) प्रक्रियीत केले जाईल व हरित पट्टया विकासासाठी वापरले जाईल.

२. औद्योगिक सांडपाणी

सध्याचा साखर कारखाना प्रकल्पातून १०६ घन. मी. प्रतिदिन इतके सांडपाणी तयार होते जे सांडपाणी प्रक्रिया प्रकल्पामध्ये प्रक्रियीत केले जाते. सांडपाणी प्रक्रिया प्रकल्प हा प्राथमिक, द्वितीय व तृतीय स्तरीय प्रक्रिया असलेला आहे.

प्रस्तावित मोलॅसिसवर आधारित आसवनी प्रकल्पांतर्गत एकुण ७२० घन.मी.प्रतिदिन इतका रॉ स्पेंटवॉश तयार होईल. स्पेंटवॉश एम.ई.ई. मध्ये इव्हॅपोरेट व कॉन्सनट्रेट केला जाईल. कॉन्सनट्रेटेड स्पेंटवॉश १४४ घन.मी.प्रतिदिन ड्राय करून पावडर केला जाईल. ही पावडर खत म्हणून वापरली जाते. केन ज्युसवर आधारित आसवनी प्रकल्पासाठी देखील हीच प्रक्रिया वापरली जाईल. (रॉ स्पेंटवॉश - ३६० घन.मी.प्रतिदिन व कॉन्सनट्रेटेड स्पेंटवॉश - ७२ घन.मी.प्रतिदिन)

प्रस्तावित आसवनी प्रकल्पांतर्गत तयार होणारे सांडपाणी हे स्पेंटलीक्स, एम.ई.ई. मधील कंडेनसेट, बॉयलर ब्लो डाऊन, कुलिंग ब्लो डाऊन आणि लॅब, वॉशिंग ८३९ घन.मी.प्रतिदिन (मोलॅसिसवर आधारित) व ४७१ घन.मी.प्रतिदिन(केन ज्युसवर आधारित) मधील सांडपाणी असेल. सर्व सांडपाणी प्रस्तावित कंडेनसेट पॉलिशिंग युनिटमध्ये प्रक्रियीत केले जाईल. प्रक्रियीत सांडपाणी हे डायल्युशन व कुलिंग टॉवर मेकअपसाठी वापरले जाईल.

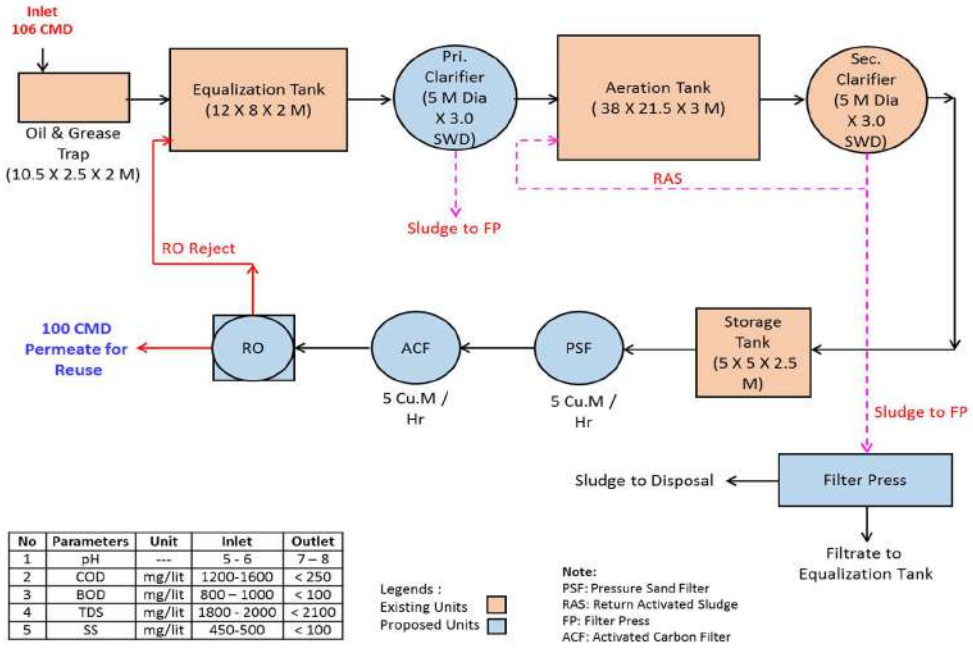
तक्ता क्र.८ साखर कारखाना प्रकल्पामध्ये तयार होणारे सांडपाणी

क्र.	तपशील	सांडपाणी (घन. मी. / दिन)	प्रक्रिया
१.	**घरगुती**	२०	प्रस्तावित घरगुती सांडपाणी प्रकीया प्रकल्पात प्रक्रिया केले जाईल.
२.	**औद्योगिक**		
	१. प्रोसेस	४८	साखर कारखान्याच्या सध्याच्या औद्योगिक सांडपाणी प्रक्रिया प्रकल्पात प्रक्रीया केली जाईल.
	२. कुलिंग	८	
	३. बॉयलर मेकअप	२४	
	४. डी.एम. बॅकवॉश	२	
	५. लॅब वॉशिंग	२४	
	एकूण औद्योगिक वापर	**१०६**	

तक्ता ९ आस्रवनी प्रकल्पाचे सांडपाणी

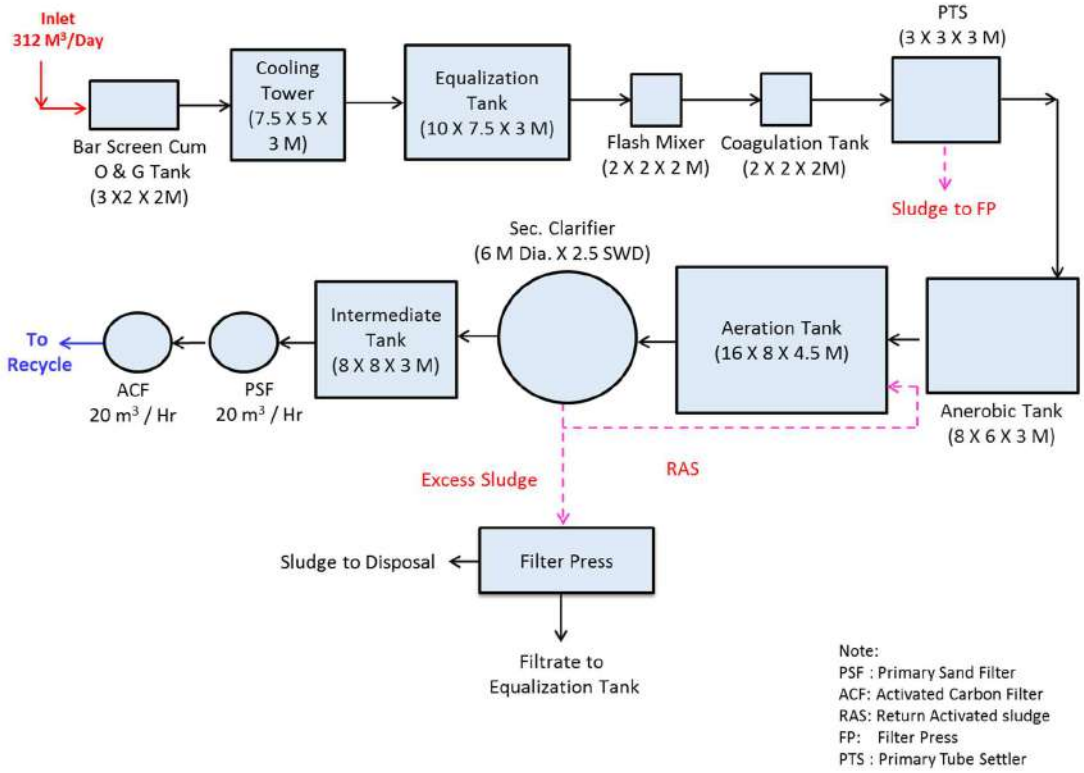
क्र.	तपशील	सांडपाणी घन मी. प्रतिदिन		प्रक्रिया
		मोलॅसिस	केन ज्युस	
१.	घरगुती	२.५	२.५	प्रस्तावित घरगुती सांडपाणी प्रक्रिया प्रकल्पामध्ये (एस.टी.पी.) प्रक्रियीत केले जाईल.
२.	औद्योगिक			
	प्रोसेस	रॉ स्पेंटवॉश - ७२०	रॉ स्पेंटवॉश - ३६०	रॉ स्पेंटवॉश एम.ई.ई मध्ये इव्हॅपोरेट व कॉन्सनट्रेट केला जाईल. कॉन्सनट्रेटेड स्पेंटवॉश ड्राय करून पावडर केली जाईल.
		कॉन्स. स्पेंटवॉश - १४४ (१.६ कि.ली)	कॉन्स. स्पेंटवॉश - ७२ (०.८ कि.ली)	
		कंडेनसेट - ६३४ (५७६ MEE + ५८ ड्रायर)	कंडेनसेट - ३१७ (२८८ MEE + २९ ड्रायर)	सर्व सांडपाणी प्रस्तावित कंडेनसेट पॉलिशिंग युनिटमध्ये प्रक्रियीत केले जाईल.
		स्पेंट लीक्स - १३०	स्पेंट लीक्स - ७९	
	कुलिंग ब्लोडाऊन	४०	४०	
	बॉयलर ब्लोडाऊन	१५	१५	
	डि.एम.बॅकवॉश	१५	१५	
	लॅब वॉशिंग	५	५	
	एकुण	कॉ. स्पेंटवॉश -१४४ **इतर सांडपाणी -८३९**	कॉ. स्पेंटवॉश -७२ **इतर सांडपाणी -४७१**	
	मानक : ८ कि.ली/कि.ली अल्कोहोल	१.६	०.८	

आकृती २ साखर कारखान्यातील सध्याचा ई.टी.पी. चा फ्लो चार्ट

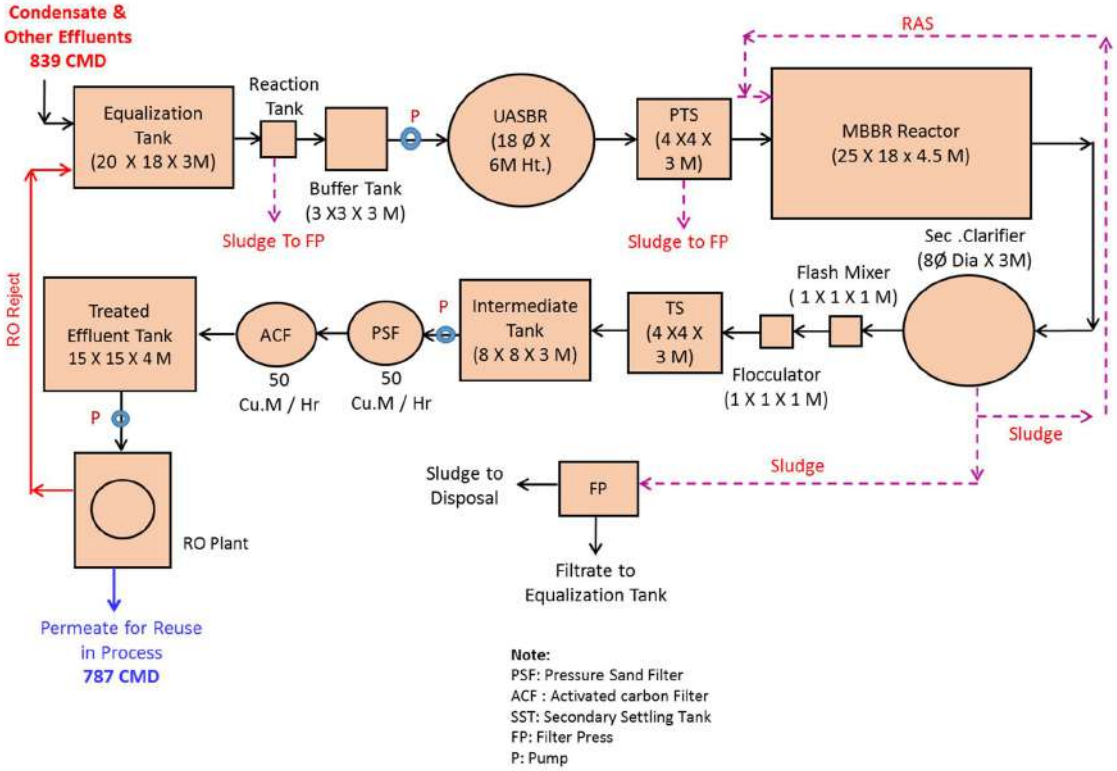


No	Parameters	Unit	Inlet	Outlet
1	pH	---	5 - 6	7 – 8
2	COD	mg/lit	1200-1600	< 250
3	BOD	mg/lit	800 – 1000	< 100
4	TDS	mg/lit	1800 - 2000	< 2100
5	SS	mg/lit	450-500	< 100

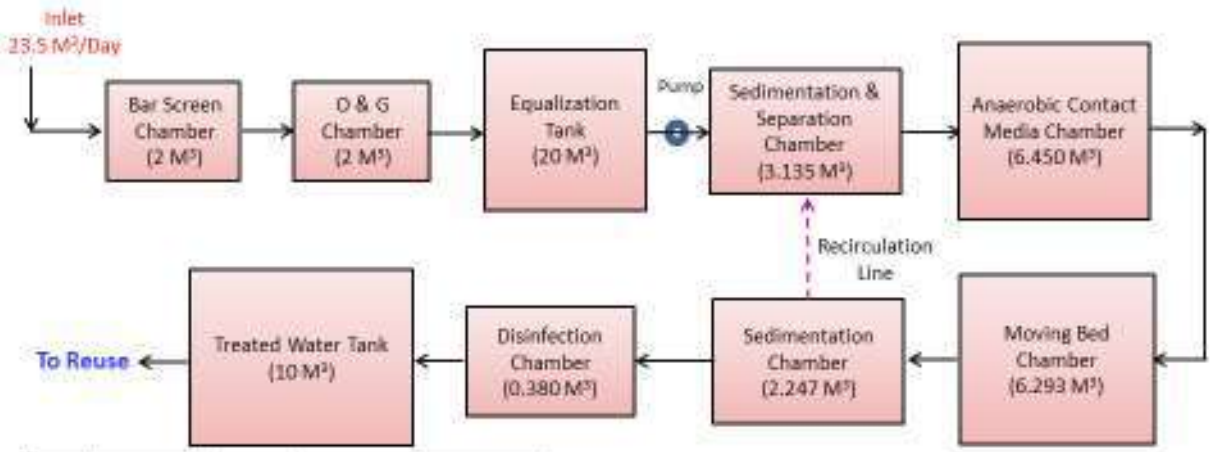
आकृती ३ साखर कारखान्यातील प्रस्तावित सी.पी.यु. चा फ्लो चार्ट



आकृती ४ आसवनी मधील प्रस्तावित सी.पी.यु. चा फ्लो चार्ट

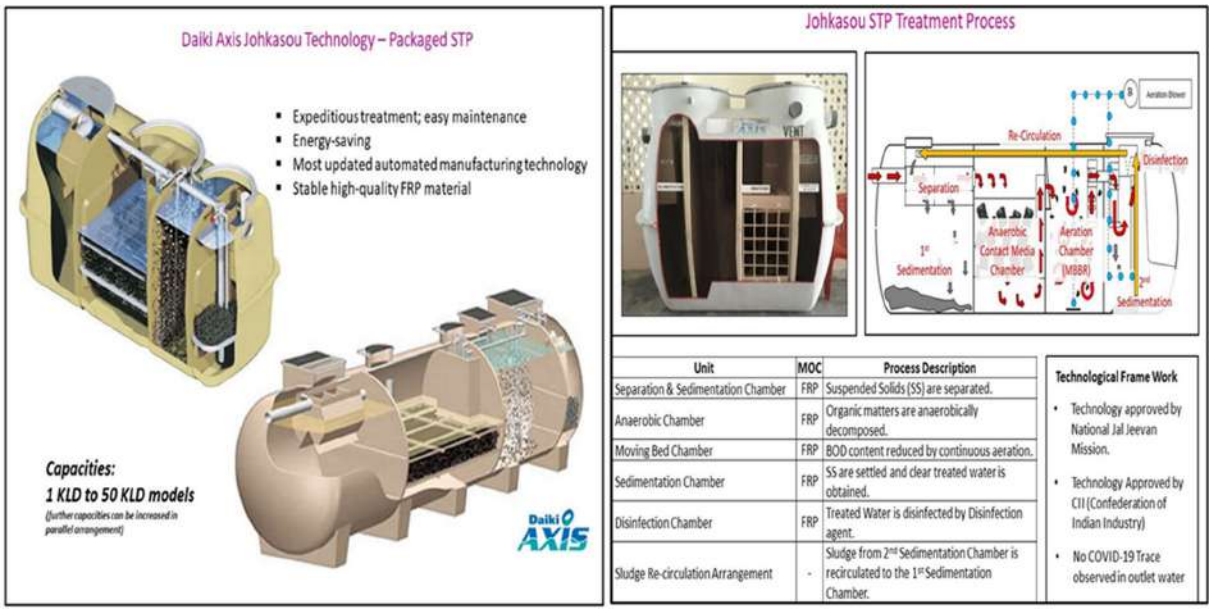


आकृती ५ प्रस्तावित एस्.टी.पी. चा फ्लो चार्ट



No.	Parameter	Unit	Inlet	Outlet
1	pH	—	6.0 – 8.5	6.0 – 8.5
2	COD	mg/lit	400 – 500	< 50
3	BOD	mg/lit	250 – 300	< 20
4	TSS	mg/lit	150 - 250	< 30
5	O & G	mg/lit	20 - 30	< 10

आकृती ६ एस्.टी.पी. प्रक्रिया



Unit	MOC	Process Description
Separation & Sedimentation Chamber	FRP	Suspended Solids (SS) are separated.
Anaerobic Chamber	FRP	Organic matters are anaerobically decomposed.
Moving Bed Chamber	FRP	BOD content reduced by continuous aeration.
Sedimentation Chamber	FRP	SS are settled and clear treated water is obtained.
Disinfection Chamber	FRP	Treated Water is disinfected by Disinfection agent.
Sludge Re-circulation Arrangement	-	Sludge from 2nd Sedimentation Chamber is recirculated to the 1st Sedimentation Chamber.

Technological Frame Work

- Technology approved by National Jal Jeevan Mission.
- Technology Approved by CII (Confederation of Indian Industry)
- No COVID-19 Trace observed in outlet water

क. वायु उत्सर्जने

सध्या साखर कारखाना प्रकल्पासाठी लागणारी वाफ ३० व २० टन प्रति तास क्षमतेच्या बॉयलर मधुन घेतली जाते. ज्यासाठी ६00 मे. टन. प्रतिदिन इतका बगॅस इंधन म्हणून वापरला जातो. वेट स्क्रबर हे वायु प्रदुषण नियंत्रक उपकरण म्हणून वापरले आहे. तसेच बॉयलरसाठी ३५ मी. उंचीची चिमणी वापरली आहे.

३० टन प्रति ताश क्षमतेचा बॉयलर प्रस्तावित आसवनी प्रकल्पांतर्गत असणला जाईल. ज्यासाठी ३६० मे.टन.प्रतिदिन इतका बगॅस इंधन म्हणून वापरला जाईल व त्यासाठी ७५ मी. उंचीच्या चिमणी सहित ई.एस.पी. हे वायु प्रदुषण नियंत्रक उपकरण म्हणून वापरले जाईल. प्रस्तावित आसवनी प्रकल्पासाठी लागणारी वाफ प्रस्तावित ३० टन प्रति ताश क्षमतेच्या बॉयलर मधुन घेतली जाईल.

हवा प्रदुषण व त्यासंबंधीच्या इतर बाबींची माहीती खालील तक्त्यात दिली आहे.

तक्ता १० बॉयलरचा व चिमणीचा तपशील

क्र.	तपशील	साखर कारखाना (सध्याचा)			आसवनी प्रकल्प (प्रस्तावित)
		बॉयलर		डी.जी.सेट	सध्याचा
१	क्षमता	३० टन/ताश	२० टन/ताश	१६५ के.व्ही.ए.	३०
२	इंधनाचा प्रकार	बगॅस	बगॅस	डीझेल	बगॅस
३	इंधन (मे.टन/दिन)	३६०	२४०	२०० लि./ताश	३६०
४	बांधणीसाठी वापरलेले मटेरीयल	आर.सी.सी		एम. एस.	आर.सी.सी
५	आकार (गोल/चौरस)	गोल		गोल	गोल
६	उंची, मी (जमीनीच्या वर)	३५ मी		५ मी.	७५ मी
७	चिमणीला असलेले प्रदूषण नियंत्रणाचे उपकरण	पेट स्क्रबर		अकॉस्टिक इनक्लोजर	ई. एस. पी.

ड. ध्वनी प्रदुषण

१. ध्वनी निर्माण करणारे स्त्रोत

- फर्मन्टेशन सेक्शन व डिस्टीलेशन सेक्शन हे इतर थोडया प्रमाणात आवाज निर्माण करणारे स्त्रोत असतील येथील ध्वनीची पातळी ७० ते ८० डी बी (ए) दरम्यान अपेक्षीत आहे. या विभागात जरूरी ध्वनी नियंत्रण साधने असविण्यात येतील.
- सध्याच्या प्रकल्पांमध्ये बॉयलर हाऊस, टर्बाईन, ऊस गाळप विभाग इत्यादी ध्वनी प्रदुषणाचे स्त्रोत आहेत.
- कारखान्यासभोवती टप्प्याटप्याने हरित पट्टा विकसित केला जाईल जेणेकरून ध्वनी प्रदुषण नियंत्रणास मदत होईल.

२. नियंत्रण उपाय

ध्वनी नियंत्रणासाठी आयसोलेशन, सेपरेशन आणि इन्स्युलेशन तंत्रे वापरली जातील. इअरमफ्स, ई. स्वरूपात कामगारांना वैयक्तीक सुरक्षा साधने (PPE) पुरविण्यात येतील. तसेच ध्वनीची पातळी कमी करण्यासाठी डी. जी. सेट स्वतंत्र कॅनॉपी मध्ये बंदीस्त करण्यात येईल.

इ. घातक स्वरूपाचा कचरा

तक्ता क्र.११ घातक स्वरूपाचा कचरा तपशील

औद्योगिक विभाग	कच-याचा प्रकार	परिमाण (मे.टन /दिन)	विल्हेवाट पद्धत
साखर कारखाना व आसवनी प्रकल्प	५.१ स्पेंट ऑईल	०.०१२	आधिकृत पुर्नविक्रेता

ड. घन स्वरूपाचा कचरा

सध्याच्या प्रकल्पांमधील वेगवेगळया विभागातून तसेच प्रस्तावित विस्तारीकरण प्रकल्पांमधुन निर्माण होणाऱ्या घन स्वरूपाच्या कच-यामध्ये खालील बाबींचा समावेश असेल.

तक्ता क्र.१२ घन स्वरूपाच्या कच-याचा तपशील

क्र.	प्रकल्प	कच-याचा प्रकार	परिमाण मे.टन/दिन	विल्हेवाटपद्धत
१.	साखर कारखाना	ई.टी.पी. स्लज	०.१	खत म्हणून वापरले जाईल.
		राख (बगॅस)	१८	पीट निर्मितीसाठी साठी दिले जाईल / सिमेंट इंडस्ट्रीज् / खत म्हणून वापरले जाईल.
२.	प्रस्तावित आसवनी	राख (बगॅस)	११	
		यीस्ट स्लज	२०	खत म्हणून वापरले जाईल.
		सी.पी.यु. स्लज	०.८	

पीट उत्पादकांसोबतचा करार आसवनी स्थापनेनंतर केला जाईल.

ड. वासाचा उपद्रव

सदर प्रकल्पांतर्गत मोलॅसिस हाताळणी व साठवणुक, फर्मन्टेशन व डिस्टीलेशन, सांडपाणी प्रक्रिया यंत्रणा, खराब मील ॲनिटेशन आणि दुर्लक्षित ड्रेन्स इ. वासाच्या उपद्रवाचे स्त्रोत असतील. सध्या वासाच्या नियंत्रणासाठी नीटनेटके हाऊसकिपींग, ई .टी.पी. युनिट मधील मैला व्यवस्थापन, ड्रेन्ससाठी क्लिचींग पावडरचा वापर इ. बाबी व्यवस्थित हाताळल्या जातील. प्रस्तावित प्रकल्पांतर्गत स्पेंटवॉश बंद नलिकेतुन हाताळणी, साठवणुकीसाठी व विल्हेवाटीसाठी नेले जाईल यामुळे होणारा वासाचा उपद्रव कमी होईल.

भ. नियम व अटींचे पालन

सध्याच्या प्रकल्पाअंतर्गत महाराष्ट्र प्रदुषण नियंत्रण मंडळ (MPCB) किंवा तत्सम संस्थेमार्फत सांडपाणी प्रक्रिया व विल्हेवाट, घातक स्वरूपाचा कचरा व घन कचरा हाताळणी व विल्हेवाट तसेच वायु उत्सर्जने इ. संबंधित घालुन देण्यात आलेल्या सर्व कायद्यांचे व नियमांचे काटेकोरपणे पालन केले जाते. सदर कार्यपद्धती प्रस्तावित आसवनी प्रकल्पांतर्गत ही पाळली जाईल.

म. पर्यावरण व्यवस्थापन विभाग

लो.बा.दे.स.सा.का.लि.मध्ये पर्यावरण व्यवस्थापन विभाग कार्यरत आहे. या विभागातील सर्व सदस्य उच्च शिक्षित आणि संबंधीत क्षेत्रातील योग्य तो अनुभव असलेले आहेत. सध्याच्या व प्रस्तावित पर्यावरण व्यवस्थापन विभागामधील सदस्य खालीलप्रमाणे–

तक्ता क्र.१३ पर्यावरण व्यवस्थापन विभाग

अनु.क्र.	पदाचे नाव	संख्या
१	व्यवस्थापकीय संचालक	01
२	कार्यकारी अधिकारी	01
३	उत्पादन व्यवस्थापक	01
४	पर्यावरणीय अधिकारी	01
५	सुरक्षा अधिकारी	01
६	मुख्य रसायनशास्त्रज्ञ	01
	एकुण	**06**

सध्याच्या व प्रस्तावित विस्तारीकरण प्रकल्पांमधील पर्यावरण घटकांसाठी व त्यांच्या देखभालीसाठी लागणा-या खर्चाचा तपशील खालील प्रमाणे:-

तक्ता क्र.१४ सध्याच्या व प्रस्तावित प्रकल्पाच्या देखभालीसाठीच्या खर्चाचा तपशील

क्र.	तपशील	खर्च (रू. लाखामध्ये)	
		भांडवली गुंतवणूक	वार्षिक देखभाल व दुरूस्ती
अ	**सध्याच्या साखर कारखाना**		
१.	बॉयलरला हवा प्रदुषण नियंत्रणासाठी वेट स्क्रबर व चिमणी, राख साठवणे प्रणाली	६५.0	१0.0
२.	जल प्रदुषण नियंत्रण ई.टी.पी.	३0.0	१५.0
३.	ध्वनी प्रदुषण नियंत्रण	२0.0	५.0
४.	घनकचरा मॅनेजमेंट	१0.0	५.0
५.	व्यवसायविषयक आरोग्य व सुरक्षीतता	१५.0	५.0
६.	हरित पट्टा विकास	४0.0	५.0
७.	एन्व्हायरमेंटल मॉनिटरींग व मॅनेजमेंट	२५.0	१0.0
	एकुण	**२0५.0**	**५५.0**
ब	**प्रस्तावित आसवनी प्रकल्प**		
१.	हवा प्रदुषण नियंत्रक उपकरणे - ई.एस.पी, चिमणी व OCMS	३५0.0	३0.0
२.	जल प्रदुषण नियंत्रण - एम.ई.ई, आसवनी सी.पी.यु., साखर कारखाना सी.पी.यु., एस्.टी.पी., ड्रायर व OCMS	६५0.0	६0.0
३.	ध्वनी प्रदुषण नियंत्रण	५0.0	१५.0
४.	व्यवसायविषयक आरोग्य व सुरक्षितता	१00.0	३0.0
५.	हरित पट्टा विकास	८0.0	३0.0
६.	रेन वॉटर हार्वेस्टिंग	३0.0	१५.0
७.	एन्व्हायरमेंटल मॉनिटरींग व मॅनेजमेंट	५0.0	२0.0
	एकुण	**१३१0.0**	**२00.0**

य) रेनवॉटर हार्वेस्टिंग संकल्पना

- प्रकल्पाचे एकुण क्षेत्र - २,८0,७९६ चर्ग मी.
- एकुण सिकामे क्षेत्र - १२,0९0.0४ चर्ग मी.
- सरासरी वार्षिक पाऊस - १,0४२ मिमी.

➢ रुफटॉप हार्वेस्टिंग

- रुफटॉप हार्वेस्टिंग क्षेत्र - ५५,१७५.00 चर्ग मी.
- रुफटॉप हार्वेस्टिंग मधून मिळणारे पाणी - ४५,९0५ घन मी.

- सरफेस हार्वेस्टिंग
  - सरफेस हार्वेस्टिंग क्षेत्र - १,७0,४४६ चर्ग मी.
  - सरफेस हार्वेस्टिंग मधून मिळणारे पाणी - ६६,८३४ घन मी.

रूफटॉप हार्वेस्टिंग आणि सरफेस हार्वेस्टिंग मधून उपलब्ध होणारे पाणी -

४५,९0५ + ६६,८४३ = १,१२,७४८ **घन मी. म्हणजेच** ११२ **दशलक्ष लिटर्स (ML)**

र) हरित पट्टा माहिती

तक्ता क्र. १५ **क्षेत्रफळाची माहिती**

क्र.	तपशील	क्षेत्र (चर्ग.मी)		
		सध्याची	**प्रस्तावित**	**एकूण**
१	**एकुण क्षेत्र**	२,३२,७९६	**४८,000**	**२,८0,७९६**
२	बांधकाम क्षेत्र			
	i. साखर कारखाना	५८,५00	--	५८,५00
	ii. आसवनी प्रकल्प	--	२५,000	२५,0९३
	iii.कॉलनी	२२,१५0	--	२२,१५0
	iv.इतर क्षेत्र	४,७00	--	४,७00
	एकूण	**८५३५0**	२५,000	**१,१0,३५0**
३	हरित पट्टा	२५,२७१.६४	**६७,३९१**	**९२,६६२.६८**
४	रस्ता क्षेत्र	९,५३४.0८	--	**९,५३४.0८**
५	पार्किंग क्षेत्र	११,0२९	४५,१३0.२	५६,१५९.२0
६	एकुण खुले क्षेत्र	१,0१,६११	--	**१२,0९0.0४**

हरित पट्टा विकसित करण्यासाठी SPM, SO_2 चे उत्सर्जन या बाबी प्रामुख्याने विचारात घेतल्या जातील. SPM, SO_2 यांच्या उत्सर्जनांमुळे होणारे परिणाम कमी करण्यास उपयुक्त अशा हरित पट्टा विकास कार्यक्रम राबविला जाईल. तसेच नियोजित हरित पट्टयातील झाडांमुळे इंडस्ट्रीमध्ये तयार होणा-या ध्वनीची तीव्रता कमी होऊन परिसरात होणारे ध्वनी प्रदुषण कमी होणेस मदत होईल. यानुसार SO_2 आणि ध्वनी प्रदुषण नियंत्रण इ. बाबी लक्षात घेऊन प्रस्तावित हरित पट्टा विकास कार्यक्रमाअंतर्गत विविध जातीच्या झाडांची लागवड केली जाईल.

ल) सामाजिक व आर्थिक विकास

सामाजिक व आर्थिक विकास अंतर्गत प्रकल्पास केंद्रस्थानीमानुन १0 कि. मी. परीघ क्षेत्रामधील १९ गावांचे सर्वेक्षण केले गेले. या अंतर्गत वैयक्तिकरित्या लोकांच्या मुलाखती मराठी प्रश्नावलीद्वारे (३0 प्रश्न) घेण्यात आल्या. अधिक माहीतीसाठी EIA रिपोर्ट मधील प्रकरण – ३ सामाजिक व आर्थिक विकास मुद्दा पहा. सामाजिक व आर्थिक विकास अभ्यासामधील निरीक्षण आणि निष्कर्ष पुढील प्रमाणे

- अभ्यास क्षेत्रातील बहुतांश गावांमध्ये मुलभूत सुविधा जसे की; पिण्याचे पाणी, प्राथमिक शिक्षण सुविधा, शौचालये, वीज, चांगली वाहतुक सुविधा व समाधानकारक शैक्षणिक सुविधा उपलब्ध आहेत.
- अभ्यास क्षेत्रातील बहुतांश लोकसंख्या चांगली कमाई असलेली आहे याचे मुख्य कारण ऊस शेती आहे.
- कारखान्याद्वारे स्थानिक लोकांना प्रत्यक्ष आणि अप्रत्यक्षपणे रोजगार पुरविला जातो.

- बहुतांश गावांमध्ये जलनिःसारण सुविधेचा अभाव, खुली गटारे तसेच विखुरलेला घन कचरा व आरोग्य सुविधा यांचा अभाव आहे.
- अपुरी व दुर अंतरावर असणा-या आरोग्यसुविधा ही स्थानिकांपुढील सर्वात मोठी समस्या आहे.

७) <u>पर्यावरणविषयक तपासणी कार्यक्रम</u>

अभ्यासासाठी निवडलेल्या भागाची पूर्व पाहणी नोव्हेंबर २०२२ मध्ये करण्यात आली होती. प्रस्तावित प्रकल्पाच्या सभोवतालच्या हवामान परिस्थीतीच्या माहितीसाठी हवा, पाणी व मातीस्वरूप इ. गोष्टींचा अभ्यास डिसेंबर २०२२ मध्ये सुरू केला गेला होता. या प्रस्तावामध्ये डिसेंबर २०२२ ते फेब्रुवारी २०२३ या दरम्यानच्या कालावधीमध्ये गोळा केलेली माहिती नमूद केली आहे. यासंबंधीची दुय्यम स्तरावरील माहिती ही सरकारी विभागांकडून घेण्यात आली आहे यामध्ये भुर्गभीय पाणी, माती, शेती आणि वने इ. समावेश आहे.

अ. जमीनीचा वापर

जमीन वापराच्या अभ्यासामध्ये भागाची रचना, कारखाने, जंगल, रस्ते आणि रहदारी इ. गोष्टींचा विचार केला जातो. संबंधीत माहितीही विविध दुय्यम स्तरांवरून जसे की जनगणना पुस्तिका, सरकारी कार्यालये, सर्वे ऑफ इंडिया टोपोशीटस्, याचबरोबर सॅटेलाईट इमेजीस् व जागेवरील प्राथमिक सर्वे इ. मधुन घेण्यात आली आहे.

ब. अभ्यासासाठी निवडलेल्या जमीनीचा वापर / व्यापलेली जमीन

तक्ता क्र.१६ जमीनीचा वापर / व्यापलेली जमीन

अ.क्र.	जमीनीचा वापर / व्यापलेलीजमीन	क्षेत्र (हेक्टर)	टक्केवारी(%)
१.	सांधकामाखालील जमीन	१३९६	४.४४
२.	लागवडीखालील जमीन	९६९३	३०.८५
३.	पडीक जमीन	४४३५	१४.१२
४.	नापीक जमीन	६५९७	१.७३
५.	जलस्त्रोत / नदी	५४२	२१.००
६.	रस्ता जमिन	५४३६	१७.३०
७.	जंगल	३३१६	१०.५६
	एकुण	**३१४१५.५०**	**१००.०**

क. हवामान माहिती

सदर पाहणीसाठी ब्यूरो ऑफ इंडियन स्टॅन्डर्ड (BIS) आणि इंडियन मेट्रोलॉजी डिपार्टमेंट (IMD) यांनी नमूद केलेली मानके वापरली आहेत. हवामान परिस्थितीच्या माहितीसाठी वेगवेगळया हवामान घटकांचा अभ्यास प्रत्यक्ष जागेवरती केला गेला आहे. यासंबंधीची व्दितीय स्तरावरील अधिक माहितीही हवामान विभाग, शिवाजीनगर येथून घेण्यात आली आहे. त्यामध्ये तापमान, आर्द्रता, पर्जन्यमान इ. बाबींचा समावेश आहे.

वेगवेगळया हवामान घटकांचा अभ्यास हा डिसेंबर २०२२ ते फेब्रुवारी २०२३ यादरम्यान केला गेला होता. या अभ्यासातील परिमाणे, उपकरणे व वारंवारता यांचा तपशील ई.आय.ए. रिपोर्टच्या प्रकरण ३ मध्ये देणेत आला आहे.

ड) हवेचा दर्जा

या विभागामधून नमुने घेतलेल्या ठिकाणांची निवड, नमुना घेण्याची पद्धत, पृथःकरणाची तंत्रे आणि नमुना घेण्याची वारंवारता इ. गोष्टींची माहिती दिली आहे. डिसेंबर २०२२ ते फेब्रुवारी २०२३ या कालावधी मधील निरीक्षणानंतरचे निकाल सादर केले आहेत. सर्व मॉनिटरींग असाइनमेंटस, नमुने घेणे व त्यांचे पृथःकरण NABL व MoEFCC, New Delhi मान्यता प्राप्त तसेच ISO ९००१ -२०१५ व OHSAS १८००१ – २००७ मानांकित मे. ग्रीन एन्वायरोसेफ इंजिनीअर्स अँड कन्सल्टंटस प्रा. लि., पुणे या प्रयोग शाळेमार्फत केले आहे. अभ्यास क्षेत्रातील हवेच्या गुणवत्तेचे मूल्यमापन करण्यासाठी PM_{10}, $PM_{2.5}$, SO_2, NO_X व CO. या घटकांचे वेगवेगळया स्थानाकांवर मॉनिटरींग केले गेले.मॉनिटरींगची वेगवेगळी स्थानके खाली दिलेल्या तक्त्यामध्ये दाखवली आहेत.

तक्ता १७ सभोवतालची हवा गुणवत्ता परिक्षणाची (AAQM) स्थानके

AAQM केंद्र आणि संकेतांक	स्थानकाचे नाव	साईट पासूनचे अंतर (कि.मी.)	साईटला अनुसरुन दिशा
A1	साईट	-	-
A2	कसबुंद	५.७८	पश्चिम
A3	शुळेवाडी	६.६८	पश्चिम
A4	पापर्डे	४.७९	पूर्व
A5	सोनाईचीवाडी	२.३५	पूर्व
A6	लुगडेवाडी	४.०४	उत्तर
A7	ढेबेवाडी	५.८९	दक्षिण
A8	मरळी	१.४०	दक्षिण

तक्ता १८ सभोवतालची हवा गुणवत्ता परिक्षणाची (AAQM) स्थानकांचा सारांश

[डिसेंबर २०२२ ते फ़ेब्रुवारी २०२३]

		Location							
		साईट	कसबुंद	शुळेवाडी	पापर्डे	सोनाईचीवाडी	लुगडेवाडी	ढेबेवाडी	मरळी
PM_{10} $\mu g/M^3$	Max.	६६.९	६४.९	५८.४	६५.०	६७.३	६६.८	६४.५	६८.३
	Min.	५८.९	५१.०	५३.३	५४.७	५८.१	५३.१	५३.०	५७.७
	Avg.	६५.०	५४.४	५६.२	६०.६	६२.०	५९.२	५७.०	६३.७
	98%	६६.९	६१.८	५८.३	६४.८	६६.७	६६.१	६४.५	६७.९
$PM_{2.5}$ $\mu g/M^3$	Max.	२९.१	१८.१	१८.९	२२.८	२५.३	२१.८	२१.१	२६.७
	Min.	१९.६	१२.७	१३.३	१८.३	२०.२	१६.७	१४.३	२०.५
	Avg.	२५.६	१५.९	१६.२	२०.७	२२.५	१९.१	१७.५	२३.८
	98%	२८.७	१८.१	१८.७	२२.७	२५.३	२१.६	२०.९	२६.५
SO_2 $\mu g/M^3$	Max.	१९.८	१३.१	१३.०	१८.७	१९.८	१५.२	१६.५	१९.२
	Min.	१३.८	७.७	६.९	१३.०	१४.८	१०.४	११.२	१३.१
	Avg.	१७.८	११.५	१०.२	१६.२	१७.५	१२.९	१४.०	१६.६
	98%	१९.८	१३.०	१२.५	१८.७	१९.८	१५.२	१६.५	१८.६
NOx $\mu g/M^3$	Max.	२९.१	१९.३	१६.९	२४.९	२४.९	२२.३	२०.४	२५.४
	Min.	२४.०	१५.०	१२.६	१९.२	२१.३	१८.२	१५.१	२२.५
	Avg.	२६.३	१७.४	१५.०	२२.०	२३.४	२०.४	१८.०	२४.३
	98%	२८.५	१९.०	१६.९	२४.७	२४.९	२२.१	२०.३	२५.४
CO mg/M^3	Max	०.८००	०.०३०	०.०३०	०.०३०	०.०३०	०.०३०	०.०३०	०.०३०
	Min	०.३००	०.०१०	०.०१०	०.०१०	०.०१०	०.०१०	०.०१०	०.०१०

		Location							
		साईट	कश्रबुंद	शुळेवाडी	पापर्डे	सोनाईचीवाडी	लुगडेवाडी	ढेबेवाडी	मरळी
	Avg	०.५५०	०.०१३	०.०१४	०.०१५	०.०१४	०.०१७	०.०१७	०.०१९
	98%	०.८००	०.०२५	०.०२५	०.०३०	०.०२५	०.०३०	०.०३०	०.०३०

Note: PM_{10}, $PM_{2.5}$, SO_2 and NO_x are computed based on 24 hourly values, CO is computed on hourly values

तक्ता १९ National Ambient Air Quality Standards (NAAQS) by CPCB

(Notification No. S.O.B-29016/20/90/PCI-L by MOEFCC; New Delhi dated 18.11.2009)

Zone Station	PM_{10} µg/M^3		$PM_{2.5}$ µg/M^3		SO_2 µg/M^3		NOx µg/M^3		CO mg/M^3	
	24 Hr	A.A.	24 Hr	A.A	24 Hr	A.A.	24 Hr	A.A.	8 Hr	1 Hr
औद्योगिक आणि मिश्रित भाग	100	60	60	40	80	50	80	40	2	4
पर्यावरणदृष्टया संवेदनशिल भाग	100	60	60	40	80	20	80	30	2	4

Note: A.A. represents "Annual Average

इ) पाण्याची गुणवत्ता

पाण्याच्या भौतिक, रासायनिक गुणधर्मांची आणि त्यातील जडधातूंची तपासणी करण्यासाठी MoEFCC, New Delhi मानांकित मे. ग्रीन एनवायरोसेफ इंजिनीअर्स आणि सल्लागार प्रा.लि., पुणे यांच्या मार्फत नमुने घेऊन त्यांचे पृथःकरण केले. भूर्ग भातील पाण्याच्या नमुना चाचणीसाठी ८ ठिकाणे व भूपृष्ठीय पाण्याच्या नमुना चाचणीसाठी ८ ठिकाणे घेतली होती.

तक्ता २० भूगर्भातील पाण्यासाठी निवडलेली ठिकाणे

स्थानक सांकेतांक	को-ऑर्डिनेटस अक्षांश व रेखांश	साईट पासुनचे अंतर (कि.मी.)	साईट पासुनची दिशा
GW1	१७°१८'४२.५८"ड ७३°५७'१६.४२"पू	०.८१	दक्षिण
GW2	१७°१८'५१.५८"ड ७३°५७'३१.५९" पू	०.७२	आग्नेय
GW3	१७°१९'०५.६८"ड ७३°५७'३१.११" पू	०.४७	पूर्व
GW4	१७°१९'४७.८५"ड ७३°५८'०६.१२" पू	१.९१	ईशान्य
GW5	१७°१९'५६.४८"ड ७३°५७'०८.१३" पू	१.४८	वायव्य
GW6	१७°१९'०९.२९"ड ७३°५७'०६.६६" पू	०.२६	पश्चिम
GW7	१७°१९'१६.२४"ड ७३°५६'२१.८०" पू	१.६०	पश्चिम
GW8	१७°१८'५४.३३"ड ७३°५६'५२.८९" पू	०.८०	नैऋत्य

तक्ता २१ पृष्ठभागावरील पाण्यासाठी निवडलेली ठिकाणे

स्थानक सांकेतांक	स्थानकाचे नाव	साईट पासुनचे अंतर (कि.मी.)	साईट पासुनची दिशा
SW1	मरळी	०.४०	नैऋत्य
SW2	चोपदारवाडी	०.६८	वायव्य
SW3	शिंदेवाडी	४.२२	पश्चिम
SW4	गवहानवाडी	१.४२	वायव्य
SW5	सांगवड	१.७५	वायव्य
SW6	येरफ़ाळे	४.५३	वायव्य
SW7	सांगवड	१.८५	ईशान्य
SW8	पापर्डे	३.६३	ईशान्य

फ) ध्वनी पातळीचे सर्वेक्षण

ध्वनी पातळीचे सर्वेक्षणसाठी कारखाना परिसरास केंद्र मानून त्यापासून १० कि.मी. अंतराच्या परिघामध्ये येणारा भाग हा अभ्यासक्षेत्र म्हणून विचारात घेण्यात आला होता. ध्वनीपातळीचे मॉनिटरींगसाठी रहिवासी, व्यावसायिक, औद्योगिक, शांतता विभाग असे चार विभाग विचारात घेण्यात आले होते. या अभ्यासामध्ये काही महत्वाच्या रस्त्यांवर वाहतुकीमुळे होणारा आवाजसुद्धा समाविष्ट केला होता. प्रत्येक ठिकाणी २४ तासा साठी ध्वनी पातळीचे मॉनिटरींग करण्यात आले. ध्वनी पातळीचे मॉनिटरींगची वेगवेगळी स्थानके खाली दिलेल्या तक्त्या मध्ये दाखवली आहेत.

तक्ता २२ ध्वनी नमुना ठिकाणे

स्थानक सांकेतांक	स्थानकाचे नाव	साईट पासुनचे अंतर (कि.मी.)	साईट पासुनची दिशा
N1	साईट	-	-
N2	सिद्धेश्वरनगर	०.५	उत्तर
N3	पापर्डे	३.८	पूर्व
N4	दिवशी	४.१	आग्नेय
N5	मरळी	१.४	नैऋत्य
N6	सोनवडे	३.१	नैऋत्य
N7	खेलवडे खूर्द	३	वायव्य
N8	नवरस्था	३.४	ईशान्य

तक्ता २३ ध्वनी पातळी

ठिकाणे	सरासरी ध्वनी पातळी (डेसिबल)					
	L_{10}	L_{50}	L_{90}	$L_{eq(day)}$	$L_{eq(night)}$	L_{dn}
साईट (N1)	५२.५	५३.७	५७.९	५६.१	५२.५	५९.७
सिद्धेश्वरनगर (N2)	४१.१	४६.८	४७.५	५३.१	४१.८	५२.६
पापर्डे (N3)	४२.३	४६.१	४७.७	५१.२	४२.१	५१.६
दिवशी (N4)	४१.८	४५.८	४७.३	५२.१	४१.२	५१.८
मरळी (N5)	४२.४	४७.०	४७.७	५३.६	४१.८	५३.०
सोनवडे (N6)	४२.७	४६.४	४७.९	५२.३	४१.८	५२.१
खेलवडे खूर्द (N7)	४२.३	४६.४	४७.९	५२.६	४१.६	५२.३
नवरस्था (N8)	४२.७	४५.९	४७.६	५१.५	४१.३	५१.५

ग) सामाजिक - आर्थिक रचना

सामाजिक व आर्थिक स्तरावरून त्याभागातील प्रगती दर्शनास येते. कोणत्याही प्रकारच्या विकास प्रकल्पामुळे कार्यक्षेत्रात राहणा-या लोकांच्या राहणी मानावर, सामाजिक व आर्थिक स्तरावर प्रभाव पडतो. याबद्दलची सविस्तर माहिती ई. आय. ए. रिपोर्ट मधील प्रकरण ३ मध्ये आहे.

ष) पर्यावरण

Random Sampling व Oppurtunistic Method या पध्दतीचावापर करून त्या भागातील जैवविविधतेचा अभ्यास करणेत आला. दृच्छिक नमुना पद्धतीने वनस्पतींसाठी आणि संधीयुक्त ठिकाण पाहणी पद्धती व मानक ठिकाण गणती पद्धतीप्रमाणे प्राण्यांसाठी कार्यक्षेत्र सर्वेक्षण करण्यात आले. साधोटाच्या गुणात्मक अभ्यासासाठीढोबळ निरीक्षण पाहणी आणि अंदाज पद्धतीचा अवलंब करण्यात आला. स्थानिक पर्यावरण बदलाचे माझे व पक्षी हे चांगले निदर्शक असल्यामुळे त्यांचा अभ्यास करणेत आला.

वनस्पती मुख्यतः मोठया वर्गातील झाडांची ओळख व त्यांचे प्रमाण यांच्याकडे अभ्यास केंद्रित होता.

८) पर्यावरणावर होणारे परिणाम आणि त्याकाठीच्या उपाययोजना

अ. भौगोलिक रचनेवर परिणाम

सदर प्रकल्पांतर्गत सध्याच्या प्रकल्पामध्ये विस्तारीकरण होणार असलेने संपादित जागेच्या भौगोलिक रचनेवर परिणाम अपेक्षित नाही. सदर औद्योगिक प्रकल्पामुळे काही सकारात्मक फायदे जसे की जमिन विकसिकरण, व झाडे लावणे अपेक्षित आहे.

ब.वातावरणावरील परिणाम

प्रस्तावित प्रकल्पामुळे हवामानावर परिणाम अपेक्षित नाही कारण जास्त तापमान असणा-या वायुंचे उत्सर्जन अपेक्षित नाही.

क. हवेच्या दर्जावरील परिणाम

प्रकल्पामुळे होणा-या परिणामांची छाननी करण्याकाठी कारखाना परिसराक्ष केंद्र मानून त्यापाक्षून १० कि.मी. अंतराच्या परिघामध्ये येणारा भाग विचारात घेतला गेला आहे.

१.मुलभूत अॅम्बिएंट वायू प्रमाणके

डिसेंबर २०२२ ते फेब्रुवारी २०२३ मध्ये करण्यात आलेल्या कार्यक्षेत्र सर्वेक्षणा दरम्यान नोंद करण्यात आलेली २४ ताक्षामधील ९८ पर्सेंटाईल प्रमाणके आणि PM_{10}, $PM_{2.5}$, SO_2 व NO_X यांची सभोवतालच्या हवेमधील सराक्षरी यानुसार मिळालेल्या प्रमाणांना मुलभूत प्रमाणके मानण्यात आली आहेत. सदर प्रमाणके परिसरामध्ये होणार परिणाम दर्शवितात. सध्याची मुलभूत प्रमाणके ई.आय.ए. रिपोर्ट मधीलप्रकरण ४ तसेच पुढील तक्त्यामध्ये मांडण्यात आली आहेत.

तक्ता २३ मुलभूत प्रमाणके (98 Percentile)

तपशील	PM_{10}	$PM_{2.5}$	SO_2	NO_X	CO
Conc. ($\mu g/m^3$)	६५.०	२५.०	१७.८	२६.३	०.५५
NAAQS	१०० $\mu g/m^3$	६० $\mu g/m^3$	८० $\mu g/m^3$	८० $\mu g/m^3$	४ mg/m^3

२. हवा प्रदुषणस्त्रोत

प्रस्तावित ३० टन प्रति ताक्ष क्षमतेचा बॉयलर हा आसवनी प्रकल्पाकाठी वापरला जातो.

प्रस्थापित १६५ के.व्ही.ए. क्षमतेचा डी.जी. सेट कार्यरत आहेत. विस्तारीकरणांतर्गत कोणताही नवीन डी.जी. सेट असविला जाणार नाही.

ड. जलस्त्रोतावरील परिणाम

१. भुपृष्ठीय जलस्त्रोतावरील परिणाम

आस्थापनी प्रकल्पातून तयार होणारे सांडपाण्यातील सॉ स्पेंटवॉश हे एम. ई. ई. मध्ये प्रक्रिया केले जाईल.कॉन्सन्टेटेड स्पेंटवॉश ड्रायरमध्ये प्रक्रिया केले जाईल व त्यापासून पावडर तयार होईल. बाकीचे सांडपाणी हे प्रक्रिया करण्यासाठी सी.पी.यू. मध्ये पाठवण्यात येईल. प्रक्रिया केलेले पाणी हे ZLD साठी वापरले जाईल. घरगुती सांडपाणी हे प्रस्तावित एस. टी. पी.मध्ये प्रक्रिया करण्यासाठी पाठवण्यात येईल.अधिक माहिती ई.आय.ए. रिपोर्ट मधील प्रकरण क्र. २ मध्ये देण्यात आली आहे.

२. भूगर्भिय पाण्याच्या गुणवत्तेवर होणारा परिणाम

प्रकल्पांसाठी लागणारे जरूरी पाणी हे कोयना नदीमधुन घेण्यात येईल. प्रस्तावित विस्तारीकरणा अंतर्गत भूजलाचा वापर होणार नाही. या अधिक, कारखान्यामधुन कोणत्याही प्रकारचे अप्रक्रियीत सांडपाणी विसर्जीत होणार नाही. त्यामुळे भूजल पाणी पातळीवर व गुणवत्तेवर कोणताही परिणाम होणार नाही.

इ. माती वर होणारे परिणाम

मातीच्या गुणधर्मावर होणारे परिणाम हे साधारणपणे वायू उत्सर्जन, सांडपाण्याचे आणि घनकचरा विनियोगयांमुळे होत असतात.सध्याच्या साखर कारखाना प्रकल्पातून वर उल्लेख केलेले घटक विसर्जीत होणार नाहीत.बॉयलर्सना ई .एस.पी. व वेट स्क्रबर बसविले आहेत. बॉयलरची राख व ई.टी.पी. स्लजरूपात घनकचरा निर्माण होईल. बॉयलरची राख वीट निर्मितीसाठी दिली जाई ल व ई.टी.पी. स्लज वृक्षारोपनासाठी खत म्हणून वापरली जाईल.घरगुती सांडपाण्यावर प्रस्तावित सांडपाणी प्रक्रिया केंद्रात प्रक्रिया केली जाईल. त्यामुळे वायु प्रदुषके अथवा सांडपाण्यामुळे जमिनीच्या रासायनिक घटकांमध्ये कोणताही मोठा बदल होणार नाही.

फ. ध्वनी मर्यादेवर होणारा परिणाम

अतिध्वनी निर्माण करणा-या यंत्रावर काम करीत असणा-या कामगारांचे संतुलन बिघडुन कामावर परिणाम होण्याची शक्यता असते. ध्वनी निर्माण होणाऱ्या स्त्रोताजवळ असणाऱ्या लोकांची ऐकण्याची क्षमता कमी होऊ शकते. शदर प्रकल्पामध्ये मुख्यत: साखर कारखान्यातील मील, कॉम्प्रेसर, बॉयलर, टर्बाइन व डि.जी. सेट हे ध्वनी प्रदूषणाचे मुख्य स्त्रोत ठरतील.शदर प्रकल्प हा ध्वनी प्रदुषण करणारा नाही.

ग. जमीन वापरावर होणारा परिणाम

प्रस्तापित आस्थापनी प्रकल्प हा सध्याच्या साखर कारखान्यामध्ये करण्यात येणार आहे. शदर जागेचा औदयोगिक कारणांसाठी वापर करण्यात येत आहे यामुळे जमीन वापरामध्ये बदल अपेक्षित नाही.

घ. झाडांवर व प्राण्यांवर होणारा परिणाम

प्रक्रिया न केलेले सांडपाणी कारखान्याच्या सभोवताली विसर्जित केल्यास पाणी संस्था व त्यावर अवलंबून असलेली जैवविविधतेवर परिणाम संभोवतो.वायु प्रदुषणा संदर्भात कारखाना SPM च्या स्वरूपात प्रदुषण योगदान देऊ शकतो. याचा विपरीत परिणाम अंशतः पक्षी, सभोवतालची पीके आणि स्थानिक लोकांवर होऊ

शकतो.झाडांवर व प्राण्यांवर होणारा परिणामांची माहिती ई.आय. ए. रिपोर्ट मधीलप्रकरण३ मध्ये देण्यात आलेली आहे.

ध. ऐतिहासिक ठिकाणावर होणारा परिणाम

रामघळ प्रकल्पाच्या ७.५ कि.मी वर आहे.कोणताही मोठा परिणाम अपेक्षित नाही.

९)पर्यावरणीय व्यवस्थापन आराखडयाची ठळक वैशिष्टये

पर्यावरणीय व्यवस्थापन आराखडयाची ठळक वैशिष्टये खालील तक्त्यामध्ये दिलेली आहेत -

तक्ता २४ पर्यावरणीय व्यवस्थापन आराखडा

क्र.	तपशील	ठिकाण	परिमाणे	वारंवारता	तपासणी
१.	हवेची गुणवत्ता	अपविंड - १, डाऊनविंड - २ (मेनगेट जवळ , केन यार्डजवळ, आश्रमनी प्रकल्पाजवळ)	PM_{10}, $PM_{2.5}$, SO_2, NOx, CO	मासिक	MoEFCC & NABL approved Laboratory मधुन
		अभ्यासक्षेत्र (साईट, कसबुंद, भुळेवाडी, पापर्डे, सोनाईचीवाडी, लुगडेवाडी, ढेबेवाडी, मरळी)			
२.	चिमणीतुन होणारे उत्सर्जन	ऑयलरच्या १ चिमणी, डी.जी. सेटची २ चिमण्या	SO_2, SPM, NOx	मासिक	
३.	ध्वनिगुणवत्ता	मेनगेट जवळ, किण्वन विभाग, साखर गोदाम, ऑयलर, डी. जी. सेट, टर्बाइन विभाग, ॲसेटिक ॲसिड विभाग	Spot Noise Level, recording; Leq(n),Leq(d) , Leq(dn)	मासिक	
४.	पिण्याचे पाणी	कारखान्याचे उपहारगृह / वसाहत	Parameters as drinking water standards IS10500	मासिक	
५.	जमीन	अभ्यास क्षेत्रामधील ठिकाणे ८ ठिकाणे S1 मरळी S2 डावरी S3 सांगवड S4 येरफाले S5 भुतारवाडी S6 नातोशी S7 खिलारवाडी S8 पाटण	PH, Salinity, Organic Carbon, N.P.K.	मासिक	
६.	पाण्याचीगुणवत्ता	अभ्यास क्षेत्रामधील ठिकाणे (भुगर्भीय पाणी- ८ ठिकाणे) GW1 GW2 GW3	Parameters as per CPCB guideline for water quality monitoring – MINARS/27/	द्वैमासिक	

क्र.	तपशील	ठिकाण	परिमाणे	वारंवारता	तपासणी
		GW4 GW5 GW6 GW7 GW8 (पृष्ठभागावरील पाणी- ७ ठिकाणे) SW1 मरळी SW2 चोपदारवाडी SW3 शिंदेवाडी SW4गावहानवाडी SW5 सांगवड SW6 येरफाले SW7 सांगवड SW8 गणेशवाडी	2007-08		
७.	सांडपाणी	प्रक्रिया न केलेले, प्रक्रिया केलेले	pH, SS, TDS, COD, BOD, Chlorides, Sulphates, Oil & Grease.	मासिक	
८.	कचरा व्यवस्थापन	प्रस्थापित कृतीतून तयार होणा-या कच-याचे वैशिष्टे आणि रूपानुसार व्यवस्थापन केले जाईल	कच-याचे निर्मिती, प्रकिया आणि विल्हेवाट यांची नोंद	वर्षातून दोनदा	लो.आ.दे.अ.सा.का.लि. यांचेकडून
९.	आपातकालीन तयारी जसे की आग व्यवस्थापन	प्रतिबंधात्मक उपाय म्हणून आगीच्या व स्फोट होणाऱ्या ठिकाणी आगीपासून संरक्षण आणि सुरक्षिततेची काळजी घेतली जाईल.	ऑनसाईट ई मरजन्सी व संकटकालीन बाहेर पडण्याचा आराखडा	वर्षातून दोनदा	लो.आ.दे.अ.सा.का.लि. यांचेकडून
१०.	आरोग्य	कारखाण्याचे कामगार आणी स्थलांतरीत कामगारांसाठी आरोग्य शीबीराचे आयोजन	सर्व आरोग्यविषयक चाचण्या	वर्षातून दोनदा	
११.	हरीतपट्टा	कारखान्याच्या परीसरामध्ये आणी शेजारील गावांमधला	झाडे जगण्याचा दर	तज्ञांनुसार	
१२.	सी.ई.आर.	निर्देशाप्रमाणे	--	सहा महिन्यातुन	

१०) <u>इतर अभ्यास</u>

आपत्ती व्यवस्थापन

आपत्ती व्यवस्थापन करताना, खालीलबाबींचा विचार केला जातो

१. प्रकल्पाच्या शेजारी राहणा-या लोकांना प्रकल्पामुळे कमीतकमी धोका असावा.

२. प्रकल्पामध्ये काम करणा-या कामगारांना शेजारी राहणा-या लोकांपेक्षा जास्त धोका आपेक्षित आहे, यामुळे प्रकल्पामध्ये काम करणा-या कामगाराना संभाव्य धोक्यापासून रक्षणाचे ट्रेनिंग दिले गेले पाहिजे जेणेकरून संभाव्य धोके कमी होतील.

ग्रीन ए. जी. (१९८२) यांनी आपत्ती व्यवस्थापन करताना विचारात घेतलेल्याबाबी -

१. प्रकल्पास धोकाः जेव्हा जिवीतास कमीतकमी धोका असतो व तो धोका पुढे कमी करणे शक्य होत नाही यावेळी ह्या धोक्यास प्राथमिकता दिली गेली पाहिजे. याअंर्तगत संभावित वित्तीय नुकसानीच्या धोक्याचा विचार केला जातो.
२. कामगार व जनतेस धोकाः फेटल ॲक्सिडेंट रेट (एफ. ऐ. आर) किंवा फेटल ॲक्सिडेंट फिक्वेंन्सी रेट (एफ.ऐ.एफ.आर) याचा वापर कामगार व जनतेस धोके यांचा अभ्यास करताना वापर केला जातो. एफ.ऐ. आर व एफ.ऐ.एफ.आर म्हणजेच औद्योगिक अपघातांमध्ये १000 लोकांमागे होणा-या अपेक्षित मृतांची संख्या होय.

यासंबंधीची अधिक माहिती ई.आय.ए. रिपोर्ट मधीलप्रकरण ७ येथे जोडली आहे.

File No.SIA/MH/IND2/423295/2023

Goverment of India

State Level Environment Impact Assessment Authority

Maharashtra

***

To,

M/s LOKNETE BALASAHEB DESAI SSK LTD DAULATNAGAR
At/post daulatnagar Tal. Patan. Dist. satara,
Satara-415211
Maharashtra

Tel.No.02372-268025; Email:maralisugar@yahoo.co.in

Sub. Terms of Reference to the Establishment of 90 KLPD C & B Heavy Molasses/ Sugarcane Syrup based Distillery with 3 MW Electricity Generation by Loknete Balasaheb Desai Sahakari Sakhar Karkhana Ltd. located At/Post: Daulatnagar, Marali Village , Tal.: Patan, Dist.: Satara, Maharashtra., At/post- daulatnagar,tell-patan,dist-satara

Dear Sir/Madam,

This has reference to the proposal submitted in the Ministry of Environment, Forest and Climate Change to prescribe the Terms of Reference (TOR) for undertaking detailed EIA study for the purpose of obtaining Environmental Clearance in accordance with the provisions of the EIA Notification, 2006. For this purpose, the proponent had submitted online information in the prescribed format (Form-1) along with a Pre-feasibility Report. The details of the proposal are given below:

1. Proposal No.:	SIA/MH/IND2/423295/2023
2. Name of the Proposal:	Establishment of 90 KLPD C & B Heavy Molasses/ Sugarcane Syrup based Distillery with 3 MW Electricity Generation by Loknete Balasaheb Desai Sahakari Sakhar Karkhana Ltd. located At/Post: Daulatnagar, Marali Village , Tal.: Patan, Dist.: Satara, Maharashtra.
3. Category of the Proposal:	Industrial Projects - 2
4. Project/Activity applied for:	5(g) Distilleries
5. Date of submission for TOR:	25 Mar 2023

Date : 27-03-2023

Shri Pravin C. Darade , I.A.S.
(Secretary, Environment & Climate change Department (MH))

Office : **217, 2nd Floor, Annexe Building, Mantralaya, mumbai-400032.**
Phone No : **268025** Mobile : **9860913779**
Email id : **psec.env@maharashtra.gov.in**

Note : This is auto tor granted letter.

In this regard, under the provisions of the EIA Notification 2006 as amended, the Standard TOR for the purpose of preparing environment impact assessment report and environment management plan for obtaining prior environment clearance is prescribed with public consultation as follows:

ACTIVITY 5 (g)- DISTILLERIES

SPECIFIC TERMS OF REFERENCE FOR EIA STUDIES FOR DISTILLERIES

GENERIC TERMS OF REFERENCE

1) Executive Summary

2) Introduction

i. Details of the EIA Consultant including NABET accreditation

ii. Information about the project proponent

3) Project Description

i. Cost of project and time of completion.

ii. Products with capacities for the proposed project.If expansion project, details of existing products with capacities and whether adequate land is available for expansion, reference of earlier EC if any.

iii. List of raw materials required and their source along with mode of transportation.

iv. Other chemicals and materials required with quantities and storage capacities

v. Details of Emission, effluents, hazardous waste generation and their management. Requirement of water, power, with source of supply, status of approval, water balance diagram, man-power requirement (regular and contract)

vi. Process description along with major equipments and machineries, process flow sheet (quantitative) from raw material to products to be provided.

vii. Hazard identification and details of proposed safety systems.

viii. Expansion/modernization proposals:

a. Copy of all the Environmental Clearance(s) including Amendments thereto obtained for

the project from MOEF/SEIAA shall be attached as an Annexure. A certified copy of the

latest Monitoring Report of the Regional Office of the Ministry of Environment and Forests as per circular dated 30th May, 2012 on the status of compliance of conditions stipulated in all the existing environmental clearances including Amendments shall be provided. In addition, status of compliance of Consent to Operate for the ongoing /existing operation of the project from SPCB shall be attached with the EIA-EMP report.

b. In case the existing project has not obtained environmental clearance, reasons for not

taking EC under the provisions of the EIA Notification 1994 and/or EIA Notification 2006 shall be provided. Copies of Consent to Establish/No Objection Certificate and Consent to Operate (in

case of units operating prior to EIA Notification 2006, CTE and CTO of FY 2005-2006) obtained from the SPCB shall be submitted. Further, compliance report to the conditions of consents from the SPCB shall be submitted.

4) Site Details

i. Location of the project site covering village, Taluka/Tehsil, District and State, Justification forselecting the site, whether other sites were considered.

ii. A toposheet of the study area of radius of 10 km and site location on 1:50,000/1:25,000 scale on an A3/A2 sheet. (including all eco-sensitive areas and environmentally sensitive places)

iii. Co-ordinates (lat-long) of all four corners of the site. Google map-Earth downloaded of the project site. Layout maps indicating existing unit as well as proposed unit indicating storage area, plant area, greenbelt area, utilities etc. If located within an Industrial area/Estate/Complex, layout of Industrial Area indicating location of unit within the Industrial area/Estate.

iv. Photographs of the proposed and existing (if applicable) plant site. If existing, show photographs of plantation/greenbelt, in particular.

v. Land use break-up of total land of the project site (identified and acquired), government/

private - agricultural, forest, wasteland, water bodies, settlements, etc shall be included. (not

required for industrial area).

vi. A list of major industries with name and type within study area (10km radius) shall be

incorporated.

vii. Details of Drainage of the project up to 5km radius of study area. If the site is within 1 km radius of any major river, peak and lean season river discharge as well as flood occurrence frequency based on peak rainfall data of the past 30 years. Details of Flood Level of the project site and maximum Flood Level of the river shall also be provided. (mega green field projects).

viii. Status of acquisition of land. If acquisition is not complete, stage of the acquisition process and expected time of complete possession of the land.

ix. R&R details in respect of land in line with state Government policy.

5) Forest and wildlife related issues (if applicable):

i. Permission and approval for the use of forest land (forestry clearance), if any, and recommendations of the State Forest Department. (if applicable)

ii. Land use map based on High resolution satellite imagery (GPS) of the proposed site delineating the forestland (in case of projects involving forest land more than 40 ha).

iii. Status of Application submitted for obtaining the stage I forestry clearance along with latest status shall be submitted.

iv. The projects to be located within 10 km of the National Parks, Sanctuaries, Biosphere Reserves, Migratory Corridors of Wild Animals, the project proponent shall submit the map duly authenticated by Chief Wildlife Warden showing these features vis-à-vis the project location and the recommendations or comments of the Chief Wildlife Warden-thereon

v. Wildlife Conservation Plan duly authenticated by the Chief Wildlife Warden of the State

Government for conservation of Schedule I fauna, if any exists in the study area

vi. Copy of application submitted for clearance under the Wildlife (Protection) Act, 1972, to the Standing Committee of the National Board for Wildlife.

6) Environmental Status

i. Determination of atmospheric inversion level at the project site and site-specific micrometeorological data using temperature, relative humidity, hourly wind speed and direction and rainfall.

ii. AAQ data (except monsoon) at 8 locations for PM10, PM2.5, SO2, NOX, CO and other parameters relevant to the project shall be collected. The monitoring stations shall be based CPCB guidelines and take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests.

iii. Raw data of all AAQ measurement for 12 weeks of all stations as per frequency given in the NAQQM Notification of Nov. 2009 along with - min., max., average and 98% values for each of the AAQ parameters from data of all AAQ stations should be provided as an annexure to the EIA Report.

iv. Surface water quality of nearby River (100m upstream and downstream of discharge point) and other surface drains at eight locations as per CPCB/MoEF&CC guidelines.

v. Whether the site falls near to polluted stretch of river identified by the CPCB/MoEF&CC, if yes give details.

vi. Ground water monitoring at minimum at 8 locations shall be included.

vii. Noise levels monitoring at 8 locations within the study area.

viii. Soil Characteristic as per CPCB guidelines.

ix. Traffic study of the area, type of vehicles, frequency of vehicles for transportation of materials, additional traffic due to proposed project, parking arrangement etc.

x. Detailed description of flora and fauna (terrestrial and aquatic) existing in the study area shall be given with special reference to rare, endemic and endangered species. If Schedule- I fauna are found within the study area, a Wildlife Conservation Plan shall be prepared and furnished.

xi. Socio-economic status of the study area.

7) Impact and Environment Management Plan

i Assessment of ground level concentration of pollutants from the stack emission based on site specific meteorological features. In case the project is located on a hilly terrain, the AQIP Modeling shall be done using inputs of the specific terrain characteristics for determining the potential impacts of the project on the AAQ. Cumulative impact of all sources of emissions (including transportation) on the AAQ of the area shall be assessed. Details of the model used and the input data used for modeling shall also be provided. The air quality contours shall be plotted on a location map showing the location of project site, habitation nearby, sensitive receptors, if any.
ii. Water Quality modeling - in case of discharge in water body

iii. Impact of the transport of the raw materials and end products on the surrounding environment shall be assessed and provided. In this regard, options for transport of raw materials and finished products and wastes (large quantities) by rail or rail-cum road transport or conveyor cum- rail transport shall be examined.

iv. A note on treatment of wastewater from different plant operations, extent recycled and reused for different purposes shall be included. Complete scheme of effluent treatment. Characteristics of untreated and treated effluent to meet the prescribed standards of discharge under E(P) Rules.

v. Details of stack emission and action plan for control of emissions to meet standards.

vi. Measures for fugitive emission control

vii. Details of hazardous waste generation and their storage, utilization and management. Copies of MOU regarding utilization of solid and hazardous waste in cement plant shall also be included. EMP shall include the concept of waste-minimization, recycle/reuse/recover techniques, Energy conservation, and natural resource conservation.

viii. Proper utilization of fly ash shall be ensured as per Fly Ash Notification, 2009. A detailed plan of action shall be provided.

ix. Action plan for the green belt development plan in 33 % area i.e. land with not less than1,500 trees per ha. Giving details of species, width of plantation, planning schedule etc. shall be included. The green belt shall be around the project boundary and a scheme for greening of the roads used for the project shall also be incorporated.

x. Action plan for rainwater harvesting measures at plant site shall be submitted to harvest rainwater from the roof tops and storm water drains to recharge the ground water and also to use for the various activities at the project site to conserve fresh water and reduce the water requirement from other sources.

8) Occupational health

i. Plan and fund allocation to ensure the occupational health & safety of all contract and casual workers.

ii. Details of exposure specific health status evaluation of worker. If the workers' health is being evaluated by pre designed format, chest x rays, Audiometry, Spirometry, Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre placement and

periodical examinations give the details of the same. Details regarding last month analyzed data of above mentioned parameters as per age, sex, duration of exposure and department wise.

iii.Details of existing Occupational & Safety Hazards. What are the exposure levels of hazards and whether they are within Permissible Exposure level (PEL). If these are not within PEL, what measures the company has adopted to keep them within PEL so that health of the workers can be preserved.

iv. Annual report of heath status of workers with special reference to Occupational Health and Safety.

9) Corporate Environment Policy

i. Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.

ii. Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.

iii. What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions? Details of this system may be given.

iv. Does the company have system of reporting of non compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism shall be detailed in the EIA report.

10) Details regarding infrastructure facilities such as sanitation, fuel, restroom etc. to be provided to the labor force during construction as well as to the casual workers including truck drivers during operation phase.

11) Enterprise Social Committment (ESC)

i. Adequate funds (at least 2.5 % of the project cost) shall be ear marked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan shall be included. Socio-economic development activities need to be elaborated upon.

11) Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof shall also be included. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, details there of and compliance/ATR to the notice(s) and present status of the case.

13) A tabular chart with index for point wise compliance of above TOR.

SPECIFIC CONDITIONS

1.List of existing distillery units in the study area along with their capacity and sourcing of raw material.

2.Number of working days of the distillery unit.

3. Details of raw materials such as molasses/grains, their source with availability.

4. Details of the use of steam from the boiler.

5. Surface and Ground water quality around proposed spent wash storage lagoon, and compost yard.

6. Plan to reduce spent wash generation within 6-8 KL/KL of alcohol produced.

7. Proposed Effluent treatment system for molasses/grain based distillery (spent wash, spent lees, condensate and utilities) as well as domestic sewage and scheme for achieving zero water conservation.

8. Proposed action to restrict fresh water consumption within 10 KL/KL of alcohol production.

9. Details about capacity of spent wash holding tank, material used, design consideration. No. of peizometers to be proposed around spent wash holding tank.

10. Details of solid waste management including management of boiler ash, yeast, etc. Details of incinerated spent wash ash generation and its disposal.

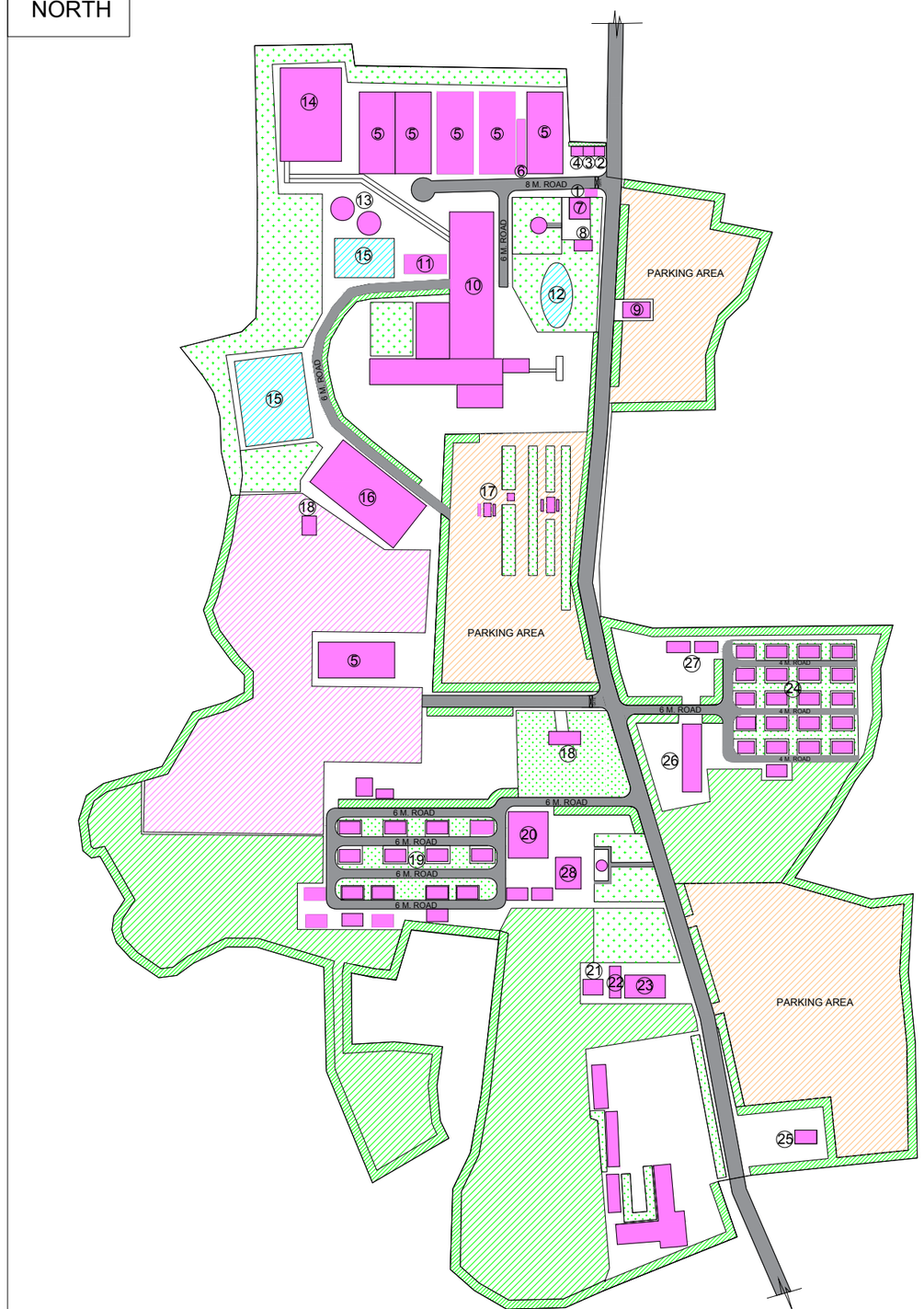
12. Details of bio-composting yard (if applicable).

13. Action plan to control odour pollution.

14. Arrangements for installation of continuous online monitoring system (24x7 monitoringdevice)

15.Add:If Sugar and distillery will have integrated effluent treatment facilities. Details regarding the same.

Plot Layout



AREA STATEMENT

SR.NO.	DESCRIPTION	AREA IN (SQ.M)
1	TOTAL PLOT AREA	280796.00
2	TOTAL BUILT UP AREA	110350.00
3	TOTAL GREENBELT AREA	92662.68
4	TOTAL PARKING AREA	56159.20
5	ROAD	9534.08
6	OPEN SPACE	12090.04

TOTAL GROUND COVERAGE AREA

SR.NO.	DESCRIPTION
1	SECURITY OFFICE
2	SUGAR OFFICE
3	TIME OFFICE
4	SAFTY OFFICE
5	SUGAR GODOWN
6	CIVIL IRRIGATION OFFICE
7	ADMIN BUILDING
8	ACCOUNT OFFICE
9	CANTEEN
10	MAIN FACTORY
11	BUILDING
12	STORAGE TANK
13	MOLASSES TANK
14	SPRAY POND
15	RWH TANK
16	ETP
17	WEIGH BRIDGE
18	TEMPLE
19	COLONY
20	INDUSTRIAL TRAINING INSTITUTE
21	GUEST HOUSE
22	MEETING HALL
23	GUEST HOUSE
24	STAFF QUARTERS
25	DISEL PUMP
26	COVID CENTER
27	ANGANWADI
28	COLLAGE

LEGENDS	DESCRIPTION
	EXISTING GROUND COVERAGE AREA
	PROPOSED GROUND COVERAGE AREA
	EXISTING GREEN BELT AREA
	PROPOSED GREEN BELT AREA
	PARKING AREA
	ROAD
	RWH TANK

PROJECT NAME -
LOKNETE BALASAHEB DESAI SAHAKARI SAKAHR KARKHANA LTD.
AT POST DAULATNAGAR, MARALI VILLAGE, TALUKA PATAN, DIST. SATARA, MAHARASHTRA.

PROJECT TITLE -
ESTABLISHMENT OF 90 KLPD C & B HEAVY MOLASSES/SUGAR CANE SYRUP BASED DISTILLERY WITH 3 MW ELECTRICITY GENERATION IN THE PREMISES OF 1250 TCD SUGAR FACTORY.

ARCHITECT - B. S. PATEL
B.E. (CIVIL) A.M.I.E.
ARCHITECTURAL & STRUCTURAL ENGINEER
613, 'E', WARD SHAHUPURI,KOLHAPUR
OFF. (0231) 2653642, (M) 9823057961

कार्यकारी अभियंता,
कोयना सिंचन विभाग, कोयनानगर
ता. पाटण जि. सातारा पीन - 415 207 ☎ (02372) 284343
E-mail :- eekcd4koyna@gmail.com

जा.क्र./कोसिंवि/बिसिं/३४०५ /२०२२
कार्यकारी अभियंता, कोयना सिंचन विभाग,
कोयनानगर ता. पाटण, जि. सातारा (४१५ २०७)
यांचे कार्यालय दिनांक :- २९ / ०९ /२०२२

प्रति,
उपविभागीय अभियंता,
कोयना सिंचन उपविभाग ,
क्रं.१ सातारा.

विषय:- लोकनेते बाळासो देसाई सहकारी कारखाना मरळी ता. पाटण यांचा ०१/०७/२०२२ ते ३०/०६/२०२३ कालवधीचा वार्षीक मंजूर कोठा करारनामा मंजूरीबाबत.

संदर्भ :- १) उपविभागाचे जापत्र/९०५ दि. २२/०७/२०२२.
२) विभागाचे जापत्र/बिसिं/३३४१ दि.०४/०८/२०२२.
३) उपविभागाचे जापत्र/बिसिं/९७६ दि. १२/०८/२०२२.
४) विभागाचे जापत्र ३३५८ दि. ०२/०९/२०२२.
५) उपविभागाचे जापत्र/१०९३ दि.०२/०९/२०२२.

उपरोक्त विषयासबंधित संदर्भ क्रं. २ अन्वेय लोकनेते बाळासो देसाई सहकारी कारखाना मरळी ता. पाटण यांचा दि. ०१/०७/२०२२ ते ३०/०६/२०२३ अखेरचा पिणेसाठी ०.३१४७ दलघमी व औद्योगिकसाठी ०.०२७२ दलघमी एकूण ०.३४१९ दलघमी वार्षीक कोठयास शर्ती व अटीवर मान्यता देणेत आली आहे.

संदर्भ क्रं. ५ चे अनुशंगाने लोकनेते बाळासो देसाई सहकारी कारखान्याचे करारनाम्यास व पाणी कोठयास मंजूरी देणेत येत असून संदर्भ क्रं. ४ चे पत्रा मधील अट्टी व शर्ती लागू राहतील त्यानूसार उपविभागाने कार्यवाही करून अनुपालन अहवाल सादर करावा.

सोबत — करारनामा २ प्रति.

स्थळ प्रत मंजूर

उपकार्यकारी अभियंता क्रीता
कोयना सिंचन विभाग,
कोयनानगर

प्रत — मा. चेअरमन/कार्यकारी संचालक बाळासो देसाई सहकारी कारखाना मरळी ता. पाटण यांना माहितीसाठी व आवश्यक त्या कार्यवाहीसाठी सादर

सोबत- करारनामा प्रत.

E:\Division Letter.docx

शाखाधिकारी
पाटबंधारे शाखा पाटण
सहकारी खरेदी-विक्री संघ ईमारत रामापुर, पाटण
ता. पाटण जि. सातारा पिन- ४१५२०६

जा.क्र./पा.शा./पाटण/ ७९८/२०२२ दि. २०/१२/२०२२

प्रति,

कार्यकारी संचालक
लोकनेते बाळासाहेब देसाई सह.
साखर कारखाना लि. दौलतनगर
ता. पाटण जिल्हा सातारा

विषय:- बिगर सिंचन पाणीपट्टी बीलाबाबत.

उपरोक्त विषयांस अनुसरुन कळविणेत येते की, आपणांस औदयोगीक व पिणेसाठी पाणी कोटा मंजुर झालेला आहे. आपणांस औदयोगीक व पिण्यासाठी पाणीच्या वापरासाठी पाणी कीती वापरले याबाबत मीटर बसविणेचे कळविणेत आलेले आहे. आपण अदयाप पर्यंत मीटर बसविलेले नाही. त्यामुळे पाणी कीती वापरले याबाबत निश्चीत माहिती मिळत नसल्याने आपण तात्काळ उपसा यंत्रास पाण्याचे मीटर बसविणेची कार्यवाही करावी.

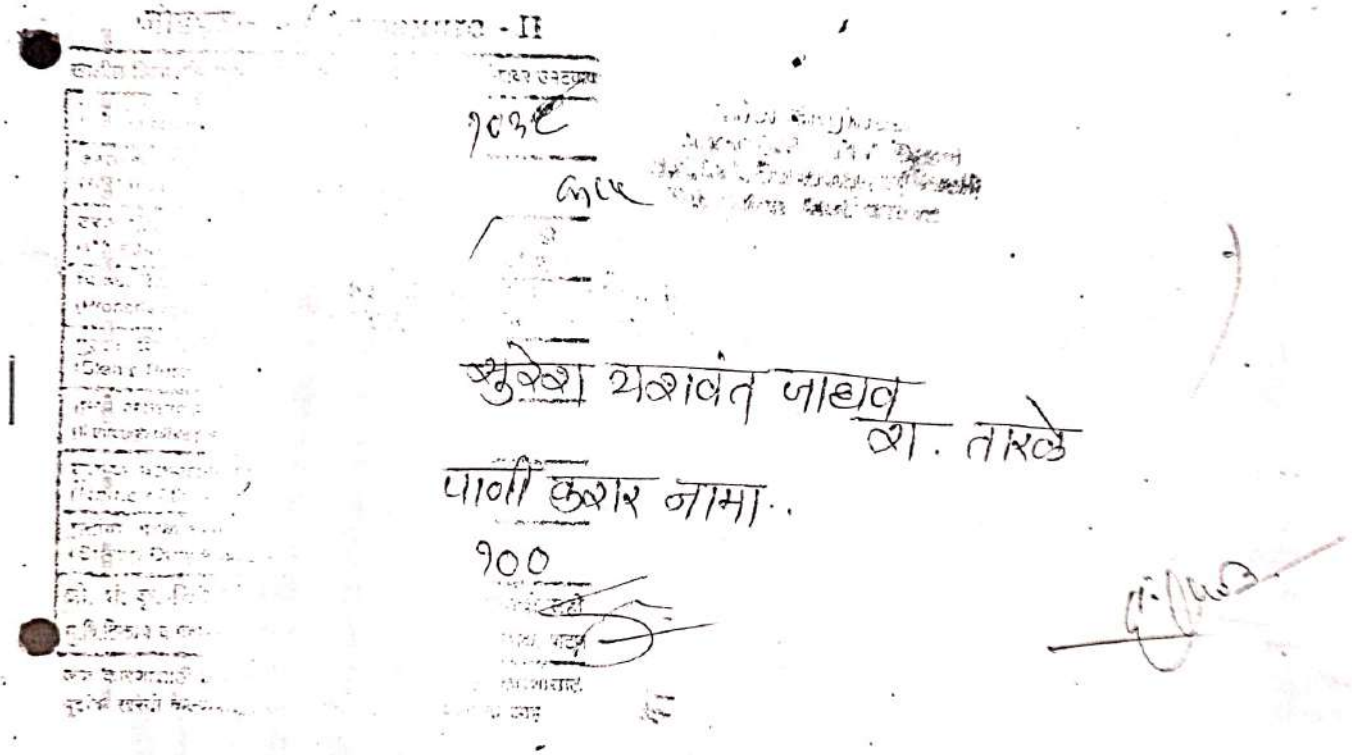
बिगर सिंचन पाण्याचा वापर मंजूर कोठयाप्रमाणे करणे आपणांस बंधनकारक आहे. वापर कमी किंवा जास्त झाल्यास महाराष्ट्र जलसंपत्ती प्राधीकरण च्या दि. ३० मे २०११ च्या पत्रामधील भाग ३ मधील क्रं. ४ च्या सुचनेप्रमाणे दंडनीय दर आकारण्यात येतील.

शाखाधिकारी
पाटबंधारे शाखा पाटण

प्रत – मा. उपविभागीय अभियंता, कोयना सिंचन उपविभाग क्रं. १ सातारा यांना माहितीसाठी व कार्यवाहीसाठी सविनय सादर.

Loknete Balasaheb Desai S.S.K. Ltd.
Daulatnagar
Inward No. 9816
23/12/2023
Forward to - CE
Managing Director

महाराष्ट्र MAHARASHTRA ◐ 2021 ◐ ZU 666333



AGREEMENT (For non- Irrigation ,water supply)

An agreement made on the----------day of----------Two thousand Twenty Two between Loknete Balasaheb Desai Sahakari Sakhar Karkhana Ltd., Daulatnagar Tal.Patan,Dist.Satara.

The users such as Private Company/industries/Enterpreneus/ Organization (which expression herein-after referred o as the company shall, unless excluded by or it be repugnant to the context or meaning thereof be deemed to include its successors and assigns) registered under the Indian Companies Act, 1913 (VII of 1913) ,

Yearly Applicable demand : Yearly Applicable demand means the water demand communicated by the **USER** for the period from **1st July 2022** to **30th June 2023** to the Executive Engineer & sanctioned by Irrigation Department every year in the month of September along with its bifurcation for industrial, domestic and agricultural use.

the companies Act, 1956) and having its registered Office at Marali-Daulatnagar, Tal.Patan Dist.-Satara herein- after referred to as the company of the one part and the Governor of Maharashtra hereinafter referred to as the Government (which expression shall unless excluded by or it be repugnant to the context or meaning thereof be deemed o include his successors and assigns)of the other Part.

Where as the company is desirous of constructing a pumping station on the company's land at Sangawad for drawing water from the source of Koyana River (hereinafter referred to as "the said source") for the use by the company's Residential drinking purpose and sugar machinery plant)(hereinafter referred to as "the said Plant") and laying underground and surface pipes and drains for discharge of the factory effluent.

AND whereas the company has applied to the Government for permission to draw 0.0272 million Cubic meter water per year (i.e. from Oct. to April) for Industrial purpose and to draw 0.3147 Million Cubic Meter water per year for Residential drinking purpose i.e. total 0.3419 Million Cubic Meter of water per year from the said source.

AND whereas the company has paid Rs.50,057/- (Rupees----------) to Government towards the proportional cost of capital outlay of the project.

AND whereas the Government has agreed to grant the aforesaid permission the company on the terms and conditions hereinafter appearing.

AND WHEREAS UNDER the said terms and conditions the company has to deposit with the Executive Engineer—Division to the Government a sum of Rs.---- as security equivalent to 2 months company's probable annual water charges based on yearly sanctioned and as communicated In cash or In the form of fixed deposit receipt or a bank Guarantee Issued a scheduled/nationalized bank having It's main/branch office situated locally for the due observance and performance by the company of the terms and conditions of this Agreement AND WHEREAS the company has accordingly prior to the execution of these presents deposited with the Government Rs.---------as security for the due observance and performance by the company of the terms and conditions herein contained; AND WHEREAS it has been agreed that the said amount will not carry any Interest if deposited in cash.

Definitions;

Quota- Quota means yearly demand sanctioned and communicated to ----------. by the executive Engineer.

Corporation : Corporation means the River Basinl corporations like Maharashtra Krishna Valley Development Corporation (MKVDC), Godavari Marathwada Irrigation Development Corporation (GMIDC), Tapi Irrigation Development Corporation (TIDC), Konkan Irrigation Development Corporation (KIDC) & Vidarbha Irrigation Development Corporation (VIDC), Municipal Corporations's Muncipalities etc.

MIDC : MIDC means Maharashtra Industrial Development Corporation

MJP : MJP MEANS Maharashtra Jeevan Pradhikaran :

Yearly Applicable demand : Yearly Applicable demand means the water demand communicated by the **USER** for the period from **1st July 2022** to **30th June 2023** to the Executive Engineer & sanctioned by Irrigation Department every year in the month of September along with its bifurcation for industrial, domestic and agricultural use.

USER : user means water using agency like individual Companies users/industry/Entrepreneur

NOW THIS AGREEMENT WITNESSTH AS FOLLOWS ;

1) (a) In consideration of the company making payment to the Government as hereinafter specified and observing and performing the convenience and conditions herein contained Government do hereby grants to the company permission to draw following quota of water for the specified purpose.

Sr.No.	Description/Use	Quantity (Million Litres (Mcum) per year)
1 1.1	Total sanctioned quota For Industry Using Potable water bottling plant	0.3419
1.2	For other than water as raw material Industrial use	0.0272
1.3	For domestic use drinking water	0.3147
1.4	For agricultural use (nursery/gardening) within the company's premises	

And use the same for the purpose of the Company's said plant or project, for supply to residential colonies and for agricultural use (nursery/gardening) for a term of year commencing from the 1st day of **July 2022 to 30st June.2023** on the following terms and conditions.

(b) The quota assigned for domestic use and for agricultural use shall not exceed 10 % each of the individual water demand. In the cases where in the water used for Domestic and Agricultural use exceeds 10 % in each case the excess use shall be charged at Industrial applicable rate specified in clause 11 of this agreement.

(c) The Industrial water requirement, the Domestic water requirement and agricultural (nursery/gardening) water requirement of the company as demanded deemed to be separate and Independent for the sole purpose and water charges assessment shall be accordingly separate and Independent for other clauses of this agreement.

2) The permission hereby granted shall be subject to the provisions of the Maharashtra Irrigation Act 1976 and the Bombay Canal rules 1934 and subsequent revisions, if any, in force and any executive orders Issued in this behalf by Government and any statutory amendment thereof from time to time and for the time being in force.

3) Nothing herein contained shall be deemed to Imply any guarantee on the part of the Government as to the availability or otherwise of any specific quantity of water and Government shall not be responsible for the non-supply or in adequate supply of water on any account whatsoever.

However in case of inadequate or non-supply due to shortage of water or reason beyond the control of the Department, bill shall be charged as per actual quantity of water lifted/ supplied during such period

4) The company shall use the water drawn from the said river for purposes of the company's said Plant and for supply to the residential colonies constructed by the company within the area of the said Plant for providing housing to its employees and workers (hereinafter referred to as "the said residential Colonies"). The company shall not sell the water from the said river to any other person, firm or company, corporation or other body. In the event of the company selling water drawn rom the said river, then the Government without prejudice to its right will forthwith revoke the licence. Government shall be entitled to recover from the company the proceeds of any such sale made by the company.

5) Government shall be entitled to utilize water of the said river available after meeting the reasonable requirements of the company, as to which matter the decision of the Government shall be final and binding on the company, for such purpose as Government deems fit.

6) The permission hereby granted shall not in any manner prejudicially affect the existing water rights vested in the upstream riparian owners ; not shall it in any way. Prejudice Government's right to here after launch or implement in public interest any new scheme or schemes on its own, on or in connection with the present source of channel of water supply available to the company, subject however to the safe-guarding of its reasonable demand referred to in clause (5) above.

7) The company shall not construct the pick-up weir in the Koyana river bed of the said river unless the proposals, plans, drawings, specifications, estimates and all other details thereof are previously submitted to and approved in writing by an officer authorized in that behalf by the Government and while granting its approval to the construction of the pick-up weir Government may Impose such conditions as it may in its discretion think fit.

8) (a) For ascertaining the quantity of water drawn by the company, the company shall forthwith at Its own cost and after obtaining prior approval in writing thereto of the Executive Engineer, Install Independent pipelines fitted with separate electronic water measuring devices for use of water for the said Independent Intention (hereinafter referred to as "the said electronic measuring devices") at such places as is Indicated by the Executive Engineer. All the pipeline layout showing locations of the measuring equipments from the said source for different purposes shall be got jointly verified and got approved from Executive Engineer, Irrigation Department. Layout from the said source shall be got approved from the Executive Engineer. No changes in the approved layout shall be made without the prior written approval from the Executive Engineer. In the event of the company failing to install and keep in proper working order the said electronic measuring devices for use of water for the said Plant and supply to the said residential colonies as aforesaid the company shall be liable to pay for the full sanctioned water quota as mentioned in clause B (d) and II. During such period 125 % of the proportionate sanctioned quantity will be charged at the prevailing rates for the said plant.

The said electronic measuring devices shall always be kept under the lock and seal of the Executive Engineer and the key of such lock shall at all times remain with the Executive Engineer. The company shall at all times, during the substance of this agreement at its own cost maintain the said electronic measuring devices in proper working order and condition.

(b) Readings for the water so drawn by the company will be taken on the said electronic measuring devices, on the 2nd day of each month/at agreed times, Jointly by the authorized representatives of the Executive Engineer and of the company.

(c) If at any time in the opinion of the Executive Engineer the said electronic measuring devices are found defective, the same shall be tested for its accuracy and the cost of such testing shall be borne and paid by the company. If on such testing the said electronic measuring devices are found to be defective the company shall forthwith get the same repaired and set right at its own cost and in the event of company failing to do so within (Thirty) days thereafter the Executive Engineer may proceed to do so on account and at the cost of the company.

(d) In the event of the said electronic measuring devices going out of order and becoming defective the quantity of water drawn by the company during the period when the meter was defective and not working shall be ascertained in the following manner.

(I) If the said electronic measuring devices remain out of order for a period of less than 30 days then the quantity of water deemed to be drawn by the USER during the said period shall be taken to be 90 % of the yearly sanctioned demand as communicated in clause No.11 or average for the last six months whichever is higher.

(II) If the said electronic measuring devices remain out of order for a period exceeding 30 days then the quantity of water deemed to be drawn by the USER during the said period shall be taken to be 110 % of the yearly sanctioned demand as communicated in clause II or average for the last Six months whichever is higher. This will be made applicable for the period during which the measuring devices remained out of order.

The aforesaid provisions will also apply when the quantity of water drawn by the company cannot be measured on account of removal of the said electronic measuring devices for repairs or the same in the opinion of the Executive Engineer not working properly.

(III) If electronic meter meant for domestic or for agricultural use is not fitted or remains out of order or is removed, the water charges will be levied as per the rates specified for the industrial use for the total quota as referred to in clause I (a) of this agreement.

9) Billing should be done on bimonthly basis. The Bill for the water drawn by the company during the previous calendar month shall be sent in duplicate/triplicate by the executive engineer to the office of the company within 15 days after the end of the water consumption month. The company shall thereafter duly pay the same by a demand draft drawn in the name of the Executive Engineer Division for and on behalf of the Government within a fortnight from the date of receipt of the bill and shall not allow the same to fall In arrears. If the company falls to pay the amount within this stipulated time (15 days from the date of receipt of the bill i.e. before the end of the current month) extra charge not exceeding 10 % Per annum of the amount due will be charged. If the delay In payment of water charges exceeds six months, the Irrigation department reserves the right to terminate the water supply with a notice of 15 days in advance.

10) The cost of all works in connection with the arrangements for water supply including the cost of measuring devices and its installation and maintenance, shall be borne by the company.

11) Subject to the provisions of clause (B) hereof, the company shall pay to the Government at the time and in the manner specified In the manner specified In clause (12) hereof water charges for the quantity of water drawn by the company from the said river as measured by the said electronic measuring devices at the following rates, namely :-

Payment- The Karkhana shall pay the water bill as per Government rule.

use as per sanctioned quota i.e. 0.3419 Million cubic meter per year.

i) Provided however that after the expiry of two years from the date the company starts drawing water from the said river if in any month the quantity of water drawn by the company is less than 90 percent of the quantity of water specified in clause (1) hereof then the company shall pay to the Government water charges calculated for 90 percent of the quantity of water specified in clause (1) here of or for average of the quantity of water drawn by the company during the period of previous three months including the month in question whichever is greater.

ii) For any unforeseen reasons, if the company/agency would like to reduce/increase the demand of water made earlier/entered in the agreement, they will be required to make the revised annual demand before the commencement of the year i.e.**1st day of July**. On acceptance of such revised demand the company will be charged as per changed demand for period specified, other conditions remaining same. A supplementary agreement on hundred rupees stamp paper for this changed quantity which will form part of main agreement.

iii) No penal rate will be levied for the quantity limited to 10 % In excess of the sanctioned one. For quantity used In excess of this 10 % without prior sanction a penal rate of 25 % will be charged over the basic rate. The delay in payment on account of this also, will be governed by clause 9 above.

iv) For any unforeseen reasons (such as sudden closure of the units or sudden rise in production etc.) there could be abrupt fluctuations in the demand on both sides. Such cases will be decided at Govt. level only, by giving due considerations to the availability of water in the particular sub-basin and so on

v) In addition to the payment of water charges referred to above the company shall also pay to the Government local fund cess at the rate of 20 paise per every rupee of basic water charges.

vi) Water bills- The bi-monthly bills for the period from July to April (for 10 months) shall be prepared on the basis of actual quantity of water lifted at the prevailing rate, The bill for the months of May & June (11th & 12th month) shall be prepared by taking review of annual sanctioned demand and the terms and conditions of the agreement and then shall be adjusted and paid accordingly. While adjusting so it shall be considered that the 90 % of the annual sanctioned demand has been lifted /used.

The water lifted in excess, upto 10 % of sanctioned demand shall be charged at single rate and excess above 10 % (without prior permission) will be charged at Penal rate of 1.25 times of the normal rate, as mentioned in the relevant clause. However the local cess shall be charged on single rate only.

12) (a) The company shall pay to the Executive Engineer, water rates and local fund cess either in advance every alternate month on the basis of anticipated quantum of water to be drawn by it from the said source during the next two month or on monthly basis within fifteen (15) days from the date of receipt of the bimonthly demands by the USER from the Executive Engineer. On default of the USER to pay the water rate or local fund cess as aforesaid vide clause 9 and 11, Government shall without prejudice to its any other rights and remedies be entitled to terminate this agreement forthwith as per clause No.9

(b) In the case of disputes regarding quantity of water billed or rate at which the bill is prepared the Company/firm/individual water user shall first pay the complete amount of the bill and then claim for refund of any excess bill charged giving the reasons/justification of wrong billing. However the decision of Superintending Engineer, Satara Irrigation Circle Satara in this regards shall be final and binding on the Company.

13) Government hereby reserves to itself the right to revise from time to time the water rates and local fund cess and company shall pay the revised water rates and local fund cess and may be fixed by Government from time to time.

14) The USER shall not discharge the effluent in any nalla or river and shall not pollute directly or indirectly any portion of the said nalla/river even by septic tank effluents. If any water sources are polluted by any Industry as indentified by Irrigation/Pollution Control Board/MIDC/MJP the company shall be charged with a penalty of rupees 5,000/- per such Incident per day till it is rectified. The opinion of Maharashtra Pollution Control Board In respect of degree of pollution will be binding on the company.

The company shall recycle the effluent water for their use such as gardening, recreation, cooling, cleaning, washing and manufacturing process etc. so that at least 50 % reduction in consumption of fresh water is achieved.

15) The effluent disposal arrangement made by the company/industry shall be got approved by the company from the Maharashtra Pollution Control Board/Environmental Department of the Government prior to commencing the operation of pumping/drawing water from the source.

16) The company shall at all the times allow an officer of Irrigation Department of the Government authorized in that behalf to inspect the said works as well as the accounts and copies taken of entries from the records maintained by the company.

17) Any notice or other document to be given to or served upon the company may be given or served on behalf of the Government by the Executive Engineer koyana Irrigation Division koyananagar and any such notice or document shall be deemed to have been duly given to or served upon the company or sent by registered post to the registered company if it is delivered at the registered office of the company or sent by registered post to the registered address for the time being of the company.

Division koyananagar to the Government as aforesaid shall be held by the Government as security for the due observance and performance by the company of the covenants, terms and conditions herein contained. In case of default on the part of the company to perform and observe any of the said covenants terms and conditions it shall be lawful for the Government in its absolute discretion to forfeit the whole of the security deposit or any part thereof without prejudice nevertheless to any rights and remedies which the Government in its absolute discretion to forfeit the whole of the security deposit or any part thereof without prejudice nevertheless to any rights and remedies which the Government may have against the company under these presents for such breach and the company shall forthwith pay up the amount so forfeited and shall always maintain the original amount of deposit throughout the period of this agreement. On the expiry of the terms of this agreement the said security deposit of Rs.----------or such part thereof as shall not have been appropriated as aforesaid shall be refunded to the company.

19) All amounts due to the Government by the company under this agreement shall be deemed to be arrears of land revenue and may without prejudice to any other rights and remedies of the Government be recovered from the company as arrears of land revenue.

20) On the expiry of the term of this agreement, Government may renew this agreement within 90 days for such further period and on such terms and conditions, as Government may at its absolute discretion deem fit.

21) The costs incurred in the execution of the incidental charges for this agreement including stamp duty shall be borne and paid by company.

22) Permission for extra water over and above the sanctioned quota will be granted only when the written permission for expansion etc. is produced by the company from the Industrial Department.

23) The agreement supersedes all the previous agreements entered into by the USER with the Government in connection with the supply of water from River Koyna.

24) The company should submit their water Indent for every rotation to the Executive Engineer koyana Irrigation Division koyananagar on or before starting of the rotation where the source is located on canal. The company should also furnish the exact quantity of water actually drawn in each rotation after completion of the rotation.

25) The company will have to make an arrangement at its own cost for adequate storage (Balancing Tank) of not less than two months requirement of water in case of perennial canal, five months requirement in cast of 8 monthly canal system, four months requirement In case of water source from seasonal river/ nalla and one month water requirement in case of perennial water source of river/ nalla. So as to take care of the closure period. But if unexpectedly the closure period is increased by more than the specified period stipulated herein the company will have to make an alternative arrangement for its water requirement at its own cost.

26) IF THE COMPANY COMMITS A BREACH OF ANY OF THE TERMS AND CONDITIONS THEREOF GOVERNMENT SHALL BE ENTITLED TO CANCEL THIS PERMISSION AND DISCONTINUE THE SUPPLY OF WATER WITHOUT PAYMENT OF ANY COMPENSATION WHATSOEVER TO THE COMPANY.

27) The Govt. hereby reserves to itself its right to change/amend/modify/cancel/revise any of the terms and conditions, rules and regulations of water management and Maharashtra Irrigation Act and rules laid under them which shall be applicable for this agreement.

IN WITNESS WIIEREOF THE Common Seal of the State Government of Maharashtra herunto affixed----------AND)-----the Executive Engineer, koyana Irrigation Division koyananagar has for and on behalf of the Governor of Maharashtra hereto set his hand and affixed the seal of his Office the day and year first herein above written. THE COMMON SEAL OF Loknete Balasaheb Desai Sahakari Sakhar Karkhana Ltd., Daulatnagar Tal. Patan, Dist. Satara.

Was pursuant to a resolution No.- 9.
Of the Board of Directors of
The company dated the- 12/02/2022
Here to affixed In the presence of-

1:Shri Ashokrao Anantrao Patil - Chairman.

2.Shri Rajaram Ramchandra Patil.- Vice Chairman.

3.Shri Suhas Laxman Desai - Managing Director

Two Directors of the company who in token thereof have here to set their respective hands in the presence of-

1.Shri Anandrao vitthal chavan- Director

2:Shri Pandurang Annaso Nalwade - Director

SIGNED, SEALED AND DELIVERED by the Executive Engineer, koyana Irrigation Division koyananagar.
Division for and on behalf of the Governor of Maharashtra in the presence of-

मंजूर

1.----------
शाखाधिकारी
पाटबंधारे शाखा पाटण

Sub-Divisional Engineer
Koyna Irrigation Sub-Division No.1
Satara.

Executive Engineer
Koyna Irrigation Division
Koynanagar.

2.----------

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Company Registration Certificate

(63)

LIC.No. No. L/25/M- 246/70-IC

Government of India
Ministry of Industrial Development & Internal Trade
(Department of Industrial Development)

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New Delhi, the 19th September, 1970.

An application dated the 28th December, 1962 for a licence having been received from M/S. Balasaheb Desai Sahakari Sakhar Karkhana Ltd., Satara, for establishing a new industrial undertaking at Marali Sangwad, Taluka Patan, District Satara, Maharashtra State, for the manufacture of sugar under Rule 7 of the Registration and Licensing of Industrial Undertakings Rules, 1952 the Central Government in exercise of the powers conferred by Rule 15(2) of the said Rules, hereby grants this licence for establishing a new industrial undertaking subject to the conditions mentioned below and in the attached sheet:-

1. The new industrial undertaking shall have an installed crushing capacity of 1,250 (One thousand two hundered and fifty) Tonnes of sugarcane per day. No Section of the industrial undertaking should have, except with the prior approval of the Government of India, capacity substantially in excess of that specified in the licence.

2. The new industrial undertaking shall be located at Marali Sangwad, Taluka Patan, District Satara, Maharashtra State.

(S. Ganesapandian)
Under Secretary to the Government of India.
(SIGNATURE OF THE OFFICER)

MINISTRY.

कार्यकारी संचालक
सहकारी साखर कारखाना लि. दौलतनगर- ४९५ २११
ता. पाटण जि. सातारा

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ADDITIONAL CONDITIONS

Please note the conditions specified below carefully.

1. Effective Steps:-

"Effective Steps" as defined in Rule 2(ii) of the Registration and Licensing of Industrial Undertakings Rules, 1952, shall be taken for the establishment of this new industrial undertaking within a period of six months from the date of issue of the licence.

2. Establishment of capacity:

The new industrial undertaking shall be established before the 1972-73 crushing season.

3. Import of plant and machinery:

The import of plant and machinery shall be subject to import control regulations in force from time to time.

4. Import of raw materials:

The import of raw materials will be regulated by the general policy that may be in force from time to time having regard to the foreign exchange position and other exigencies. If the industrial undertaking or any of its associate concerns is entitled to an established importers' quota licences for the items covered by the licence, the question as to whether and if so to what extent, such established importers' quotas should be utilised for or diverted to the import of materials will be considered separately on the merits of the case.

5. Expansion:

The industrial undertaking shall obtain prior permission from the Government of India before effecting a substantial expansion of the capacity for the manufacture of this article or before establishing capacity for the manufacture of any other article falling under the First Scheduled to the Act.

6. Allocation of controlled raw materials:

No guarantee can be given in regard to the allocation of pig iron/scrap/steel, etc., from sources controlled by the Government of India.

...2/-

(63)

LIC.SCN.NO.L/25/M-246/70-IC

Government of India
Ministry of Industrial Development & Internal Trade
(Department of Industrial Development)

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ता. पाटण जि. सातारा

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