

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 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;**

दीलतनगर (मरळी) पिन - ४१५ २११
ता. पाटण जि. सातारा (महाराष्ट्र)

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

दौलतनगर (मरळी) पिन - ४१५ २११
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



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

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A/C Payee Only

The instrument is valid for three months from the date of issue

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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 |

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.

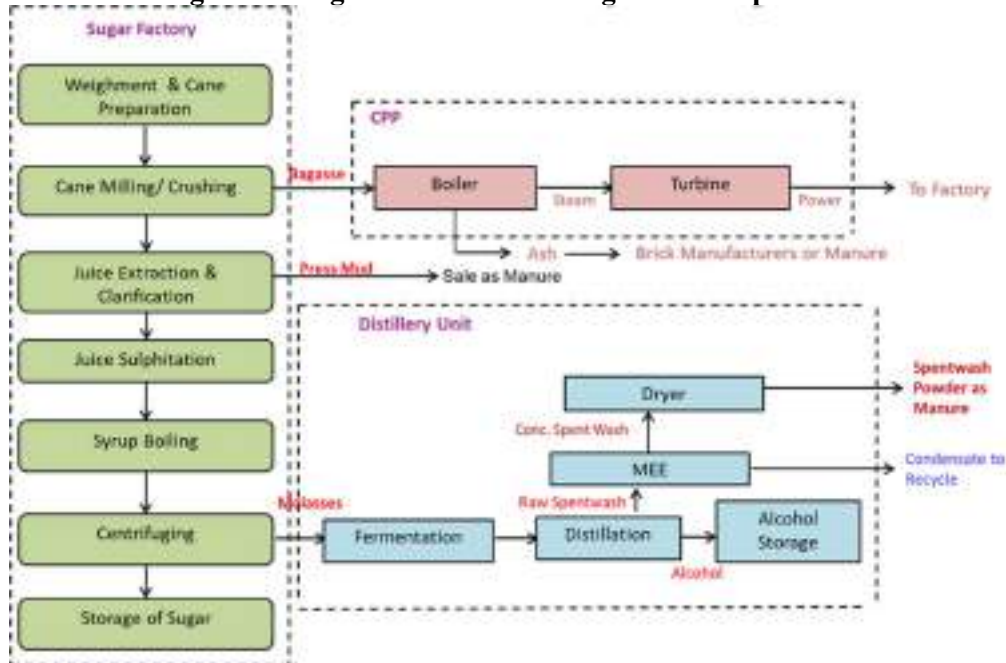
5) THE PURPOSE

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 M³/D. Out of total water requirement, 625 M³/Day will be Cane Condensate, 63 M³/Day will be treated water from ETP, STP, fresh water will be 26 M³/Day taken from Koyna river.

Total water required for proposed distillery unit during crushing season will be 1315 M³/Day. Out of total water requirement, 787 M³/Day will be treated water from CPU, 59 M³/Day will be treated water from ETP, STP, 206 M³/Day Harvested rainwater & 263 M³/Day will be the fresh water taken from Koyna river.

Total water required for proposed distillery unit during non-crushing season will be 1315 M³/Day. Out of total water requirement, 787 M³/Day will be treated water from CPU, 228 M³/Day Harvested rainwater & 300 M³/Day will be the fresh water taken from Koyna river.

b. Effluent Treatment-

i) Domestic Effluent

Domestic effluent from existing sugar factory is 20 M³/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 M³/D (Domestic effluent from sugar factory – 20 M³/D & molasses base distillery 2.5 M³/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 M³/D. Same is treated in existing Effluent Treatment Plant (ETP) provided in own factory premises having capacity 365 M³/D comprising of primary & secondary unit operations.

From proposed molasses distillery unit, raw spentwash about 720 M³/D will be generated. Here, raw spentwash will be concentrated in Multi Effect Evaporator (MEE). Concentrated spentwash @ 144 M³/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 M³/D, condensate @ 634 M³/D (576 MEE+ 130 Dryer), cooling & boiler blow down @ 55 M³/D and lab-wash & DM backwash @ 20 M³/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 M³/D, condensate @ 317 M³/D (288 MEE+ 29 Dryer), cooling & boiler blow down @ 55M³/D and lab-wash & DM backwash @ 20 M³/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: M³/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 of KL/KL Alcohol | 1.6 | 0.8 | |

Figure 3 Flow Chart of Proposed Sugar Factory ETP

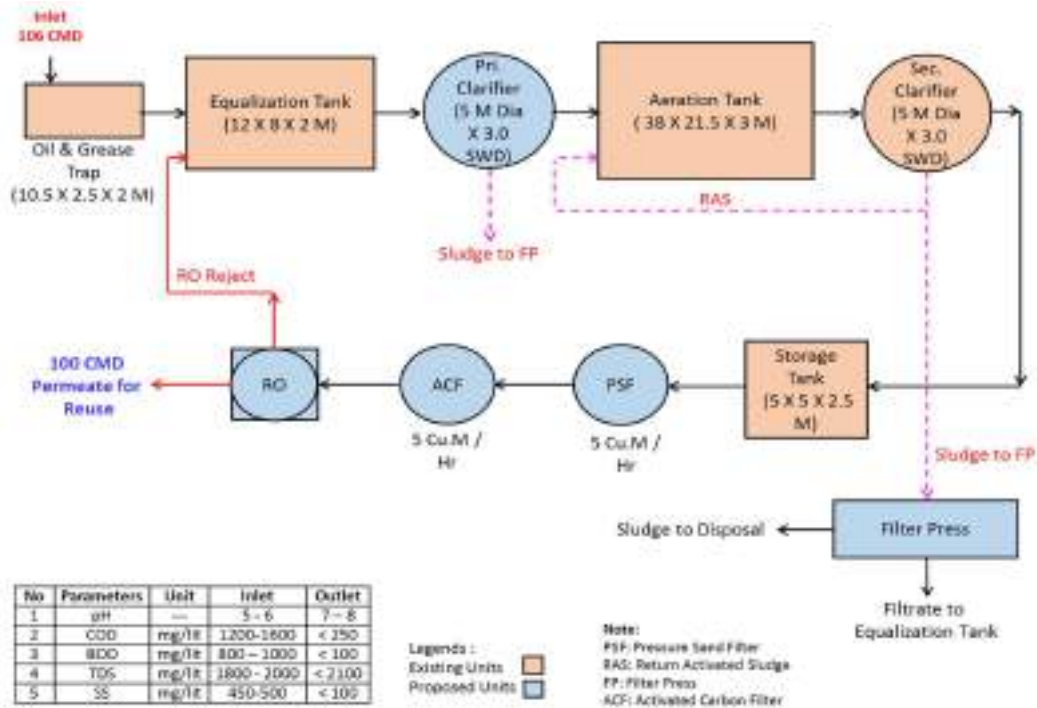


Figure 4 Flow Chart of Sugar Factory CPU (Proposed)

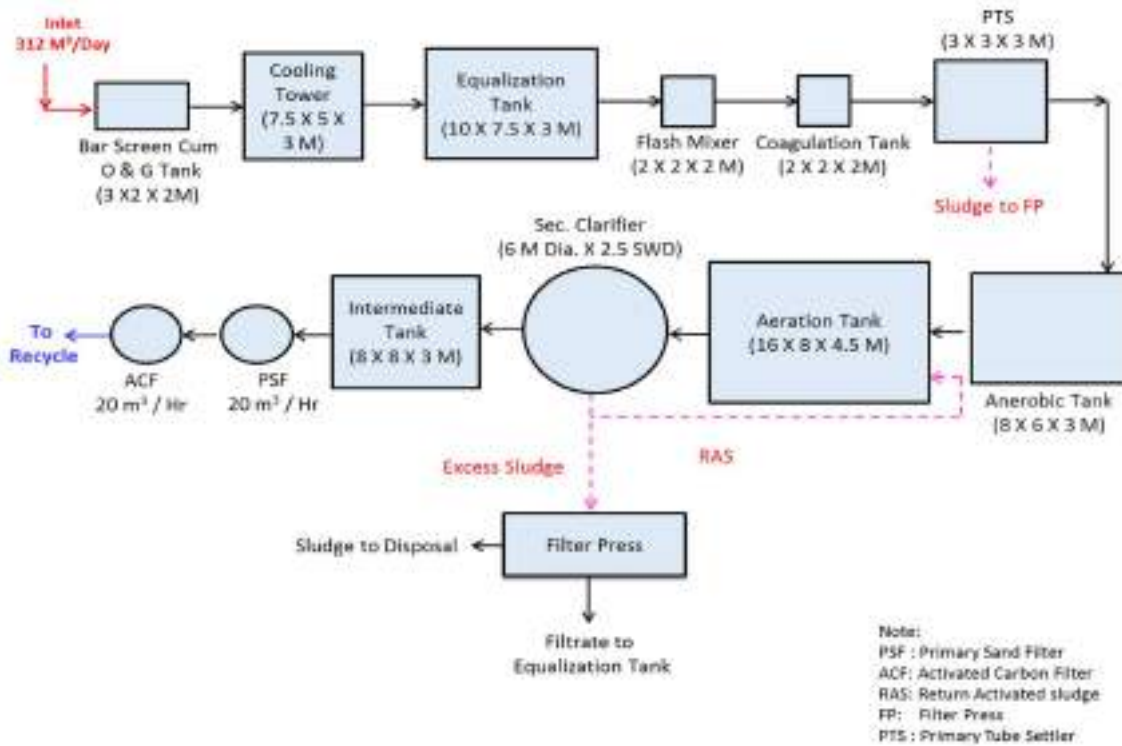


Figure 5 Process Flow Diagram of Proposed CPU for Distillery

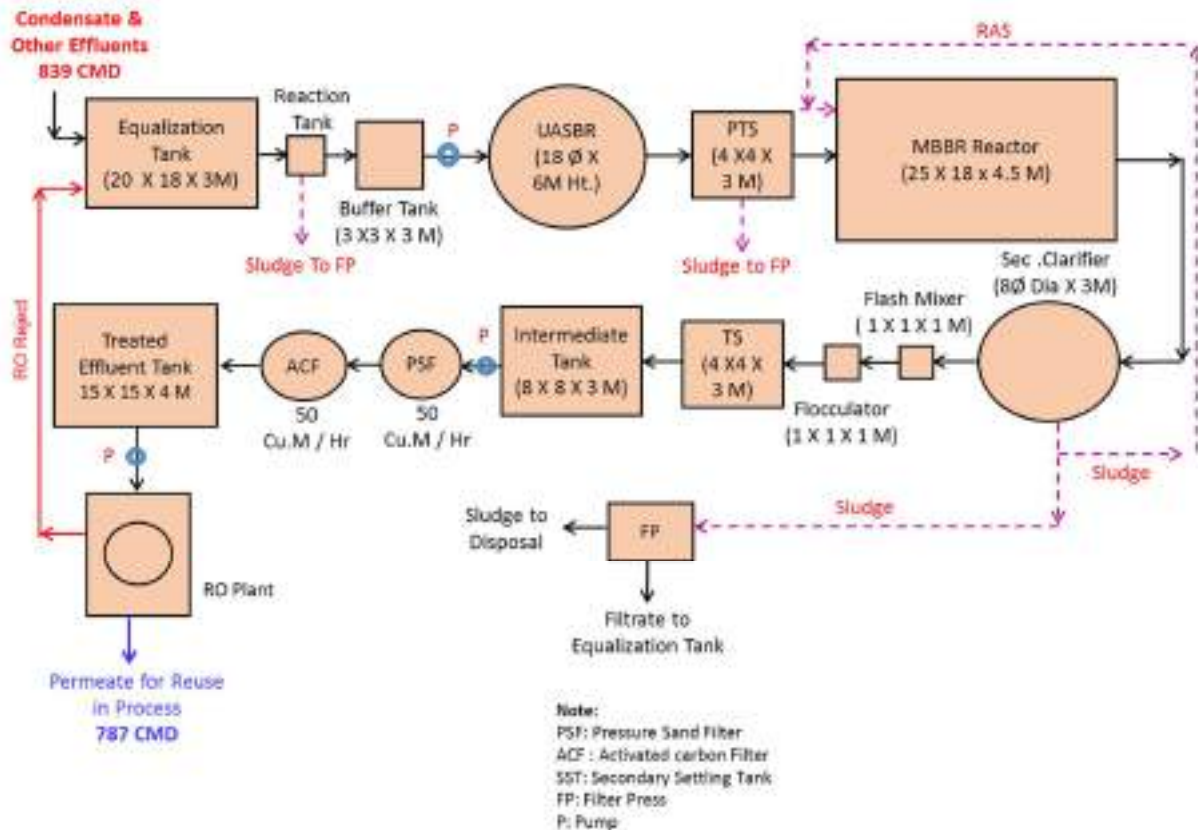


Figure 6 Flow Chart of Proposed STP

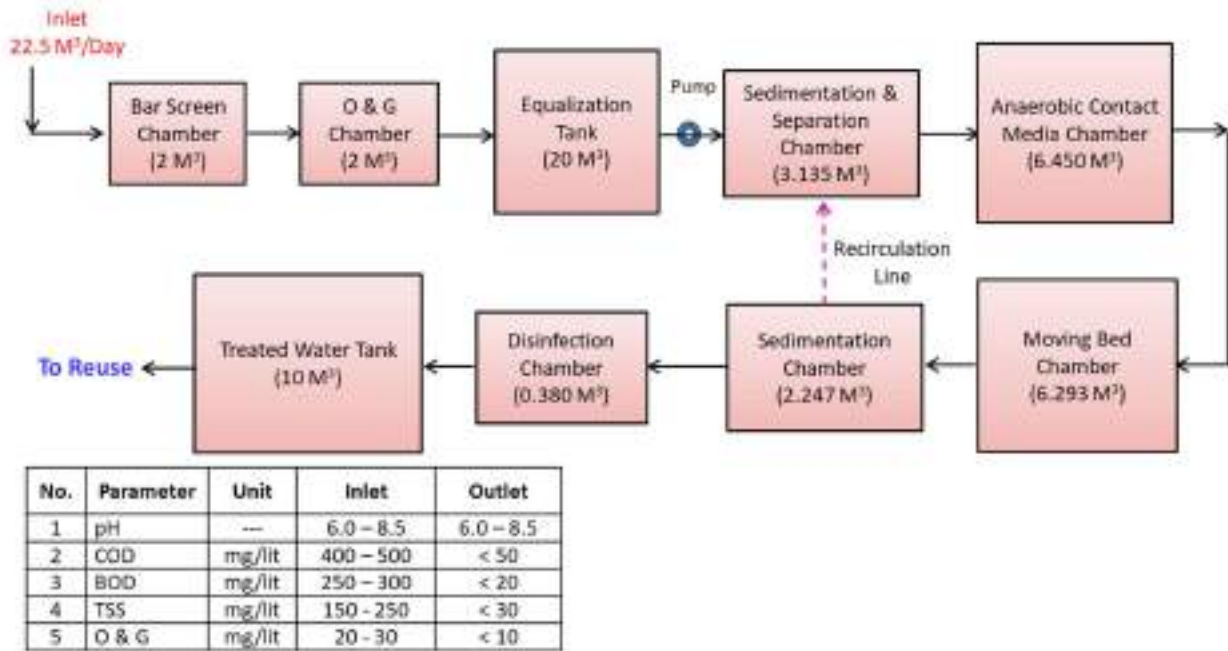


Figure 7 Process Technology of STP



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 CO₂ 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 M²
- Total Open Area – 12,090.04M²
- Average annual rainfall in the area = 1,042 mm

A. Roof Top Harvesting-

$$\begin{aligned} \text{RWH Quantity} &= 55,175 \text{ M}^2 \times 1.04 \text{ M} \times 0.8 \\ &= \mathbf{45,905 \text{ M}^3} \end{aligned}$$

B. Surface Water Harvesting –

1. RWH Quantity from Green Belt = 92,662.68 M² X 1.04 M X 0.3
= **28,910 M³**
2. RWH Quantity from Roads = 9,534.08 M² X 1.04 M X 0.5
= **4,957 M³**
3. RWH Quantity from Parking = 56159.20 M² X 1.04 M X 0.5
= **29,202 M³**
3. RWH Quantity from Open Space = 12,090.04 M² X 1.04 M X 0.3
= **3,772 M³**

$$\begin{aligned} \text{Total RWH from Surface Area} &= 28,910 \text{ M}^3 + 4,958 \text{ M}^3 + 29,203 \text{ M}^3 + 3,772 \text{ M}^3 \\ &= \mathbf{66,843 \text{ M}^3} \end{aligned}$$

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

| | | | | |
|-----------------------------|---|-----------------------------|---|-------------------------------|
| Rooftop Harvesting | + | Surface Harvesting | = | Total RWH |
| 45,905 M³ | + | 66,843 M³ | = | 1,12,748 M³ |
| | | | = | 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 *Mangifera indica* (Mango), *Sesbaniagrandiflora* (Shewarie) *Derris indica* (Karanj), *Terminaliacatappa* (Indian Almond Tree), *Polyalthialongifolia* (Ashok) etc. shall be done.

Table 16 Area Statement of LBDSSSL

| 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, SO₂ 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 14001:2004/OHSAS 18001-2007 certifications by DNV. Ambient air monitoring was conducted in the study area to assess the quality of air for PM₁₀, PM_{2.5}, SO₂, 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 | Sonaic hiwadi | Lugad ewadi | Dheb ewadi | Marali |
| PM ₁₀ µg/M ³ | 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/M ³ | 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/M ³ | 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 |
| NO _x µg/M ³ | Percentile | | | | | | | | |
| | 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% | 28.5 | 19.0 | 16.9 | 24.7 | 24.9 | 22.1 | 20.3 | 25.4 |
| CO mg/M ³ | Percentile | | | | | | | | |
| | 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% | 0.800 | 0.025 | 0.025 | 0.030 | 0.025 | 0.030 | 0.030 | 0.030 |

Notes: PM₁₀, PM_{2.5}, SO₂ 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/M ³) | 24 Hr | 100 | 100 |
| | A.A. | 60 | 60 |
| PM _{2.5} (µg/M ³) | 24 Hr | 60 | 60 |
| | A.A. | 40 | 40 |
| SO ₂ (µg/M ³) | 24 Hr | 80 | 80 |
| | A.A. | 50 | 20 |
| NO _x (µg/M ³) | 24 Hr | 80 | 80 |
| | A.A. | 40 | 30 |
| CO (mg/M ³) | 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 | Upstream 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 | Sidheshwarnagar | 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 | Belvade 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.

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.

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 PM₁₀, PM_{2.5}, SO₂ and NO_x 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/m³) | 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 , NO _x , CO | Monthly | MoEFCC and NABL Approved External Lab |
| | | Study area - Industrial Site, Kasrund, Sulewadi, Papatde, 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 , NO _x , 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 , NO _x | 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, Papatde, 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 | <ul style="list-style-type: none"> • 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°C 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 is 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 आळाभाहेष देसाई सहकारी साखर कारखाना लिमिटेड
(लो.आ.दे.स.सा.का.लि.)
दौलतनगर मरळी, ता. पाटण.जि. सातारा, महाराष्ट्र राज्य
यांच्या
प्रस्तावित १० के.एल.पी.डी.मोलॅसिभ (सी व सी)/ केन ज्युस पर आधारित
आसपनी
प्रकल्प संदर्भातील इन्फायरमेंट इंपॅक्ट असेसमेंट अहवालाचा भागशा

१) प्रकल्पाविषयी थोडक्यात

लोकनेते आळाभाहेष देसाई सहकारी साखर कारखाना लिमिटेड (लो.आ.दे.स.सा.का.लि.) यांचा प्रकल्प गट क्र. १३३/१/अ, १३३/२/अ, १३४, १३५/३/अ, 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 १० कि.लि.प्रतिदिन क्षमतेचा मोलॅसिभ (सी व सी)/ केन ज्युसपर आधारित आसपनी प्रकल्प भ्रंध्याच्या १२५० टन प्रतिदिन गाळप क्षमतेचा साखर कारखाना प्रकल्पाच्या आसपत उभारण्यात येणार आहे.

भ्रंधर प्रकल्प हा दि. १४.०९.२००६ च्या इन्फायरमेंट इंपॅक्ट असेसमेंट (EIA) नोटीफिकेशन नं. स. ओ. १५३३ (ई) च्या १३ जून २०१९ च्या नोटीफिकेशन मधील तरतुदीनुसार श्रेणी 'अ १' मध्ये येतो. यानुसार, पने, पर्यावरण व हवामान भ्रंधल मंत्रालय, नवी दिल्ली यांच्याकडे फॉर्म १ ऑप्लिकेशन जमा केला आहे व स्टॅंडर्ड ToR's मंजुर झाले आहेत. प्रस्तावित प्रकल्प साधिताना सुरक्षिततेचे नियम व पर्यावरणाचे संरक्षण करण्याच्या सार्थ गोष्टीची खबरदारी घेतली जाईल.

खालील तक्त्यामध्ये गुंतवणुकीचे तपशील दिलेले आहेत.

तक्ता क्र. १ गुंतवणुक

| क्र | विभाग | भांडवली गुंतवणुक (रु. करोडमध्ये) | | |
|-----|---------------|----------------------------------|------------|--------|
| | | भ्रंध्याची | प्रस्तावित | एकुण |
| १ | साखर कारखाना | ४७.२३ | -- | ४७.२३ |
| २ | आसपनी प्रकल्प | -- | १३० | १३० |
| | एकुण | ४७.२३ | १३० | १७७.२३ |

तक्ता क्र. २ कामकाजाचा कार्यकाल

| क्र | विभाग | ऑपवेशनचे दिवस (नं.) | | |
|-----|---------------|---------------------|-------------|------|
| | | हंगाम | भ्रंध हंगाम | एकुण |
| १ | साखर कारखाना | १८० | -- | १८० |
| २ | आसपनी प्रकल्प | १८० | १५० | ३३० |

२) प्रकल्पाची जागा

लो.आ.दे.स.सा.का.लि.द्वारा दौलतनगर मरळी, ता. पाटण.जि.सातारा, महाराष्ट्र राज्य येथे २८.०७ हेक्टर एवढी जागा संपादित करणेत आली आहे. भ्रंधर जागेमध्येच आसपनी प्रकल्प उभारण्यात येणार आहे.

जागेचा ले-आऊट प्लॅन ऑपेन्डीकस - अ येथे जोडला आहे. जागेसंदर्भातील माहिती खालीलप्रमाणे आहे.

तक्ता २ विविध विभागांच्या क्षेत्राचा तपशील(वर्ग.मी)

| क्र. | तपशील | क्षेत्र (वर्ग.मी) | | |
|------|-------------------|-------------------|------------|-----------|
| | | भ्रष्ट्याची | प्रस्तापित | एकूण |
| १ | एकूण क्षेत्र | २,३२,७९६ | ४८,००० | २,८०,७९६ |
| २ | आंधकाम क्षेत्र | | | |
| | i. भाखर कारखाना | ५८,५०० | -- | ५८,५०० |
| | ii. आभयनी प्रकल्प | -- | २५,००० | २५,००० |
| | iii. कॉलनी | २२,१५० | -- | २२,१५० |
| | iv. इतर क्षेत्र | ४,७०० | | ४,७०० |
| | एकूण | ८५,३५० | २५,००० | १,१०,३५० |
| ३ | हरित पट्टा | २५,२७१.६४ | ६७,३९१ | ९२,६६२.६८ |
| ४ | ब्रता क्षेत्र | ९,५३४.०८ | -- | ९,५३४.०८ |
| ५ | पार्किंग क्षेत्र | ११,०२९ | ४५,१३०.२ | ५६,१५९.२० |
| ६ | एकूण खुले क्षेत्र | १,०१,६११ | -- | १२,०९०.०४ |

३) प्रकल्प प्रवर्तकांची ओळख

लो.आ.दे.भ.भा.का.लि. च्या प्रवर्तकांना भाखर कारखाना व आभयनी प्रकल्प क्षेत्रामधील चांगला अनुभव आहे. प्रवर्तकांनी प्रकल्प नियोजन तसेच अंमलबजावणी योजनेचा भ्रष्टोल 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. बुहास देसाई | व्यवस्थापकीय बंचालक |

४) उत्पादनांविषयी माहिती

लो.आ.दे.भ.भा.का.लि. यांच्या भ्रष्ट्याच्या भाखर कारखाना तसेच प्रस्तापित आभयनी प्रकल्पामधून तयार होणारी उत्पादने व त्यांचे परिमाण खालीलप्रमाणे आहे.

तक्ता क्र.४ भाखर कारखाना आणि आभयनी प्रकल्पांची उत्पादने

| प्रकल्प | उत्पादने व उपउत्पादनांची नावे | क्षमता |
|---------------------------------|---|-----------------|
| आभयनी (९० के.एल.पी.डी.) | बेक्टीफाईड रिपब्रिट(आर.एभ.) / एक्स्ट्रा न्युट्रल अक्लोहोल(इ.एन.ए.) / इथेनॉल | ९० कि. लि./दिन |
| | उपउत्पादने | |
| | फ्युजेल ऑईल | ०.१८ मे.टन/दिन |
| | CO ₂ | ६८ मे.टन/दिन |
| | बॅटवॉश पावडर | ७२ मे.टन/दिन |
| *भाखर कारखाना (१२५० टन /दिन) | भाखर(११-१२%) | १६२.५ मे.टन/दिन |
| | उपउत्पादने | |
| | अर्गॅस(३२%) | ३७५ मे.टन/दिन |
| | प्रेसमड(३.५%) | ५० मे.टन/दिन |
| | मोलेक्झ(४-५%) | ५० मे.टन/दिन |

NOTE- *: मूल्य सैध CTO नुसार.

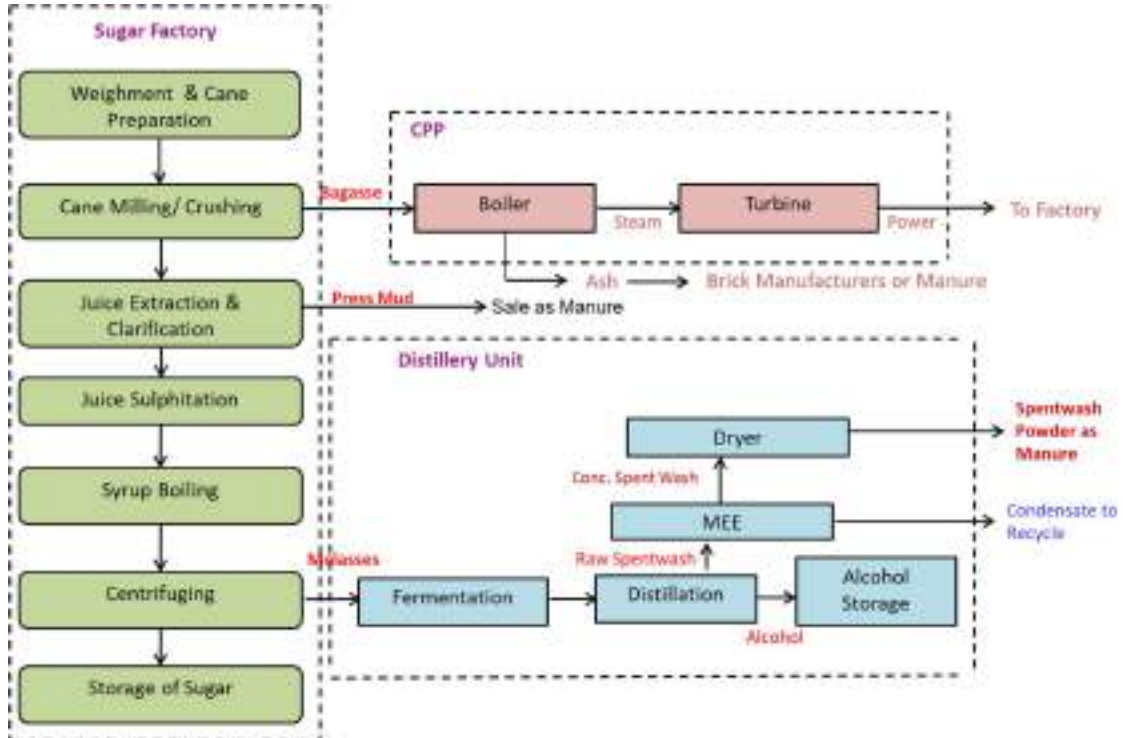
भाखर कारखाना तसेच आभयनी बंदर्भातील उत्पादन प्रक्रिया आणि प्रवाह तक्ता (फ्लो चार्ट) आकृती १ मध्ये दिला आहे.

५) प्रकल्पाचे उद्दिष्ट

- भाखर उद्योग हा देशातील दुसरा सर्वात मोठा शेती आधारित उद्योग आहे.
- भाखर उद्योग हा रोजगार निर्मिती, उत्पन्न निर्मिती आणि कार्यक्षेत्रामध्ये पायाभूत घटक तयार करण्यासाठी महत्त्वपूर्ण आहे.
- अल्कोहोलयुक्त पेयांच्या उत्पादनांसाठी ऊर्जा, मोलॅसिस, कडधान्ये व इतर कृषी उत्पादने आभयनी उद्योग आपरतो. जगभर आपरल्या जाणा-या फरमेंटेड व डिस्टीलड पेयांचे उत्पादन स्थानिक उत्पादित व उत्तम पातावरीय परिस्थितीत वाढलेल्या कच्चा मालांवर आधारित आहे. इथिल अल्कोहोल हे फरमेंटींग मोलॅसिस पासून तयार केले जाते. मोलॅसिस हे भाखर कारखान्यामधून मिळते.
- अल्कोहोल उद्योगाची देशाच्या अर्थव्यवस्थेमध्ये महत्वाची जागा आहे. अल्कोहोल हे खुप रसायनांमध्ये कच्चा माल म्हणून आपरले जाते. त्याखरोखरच या व्यवसायामुळे भरकारला मोठ्या प्रमाणात अक्षकारी कर वसूल होतो.
- पेट्रोलखरोखर अल्कोहोलचे ब्लेंडींग केलेस पाँवर अल्कोहोल यावररूपात अल्कोहोल मध्ये इंधन म्हणून क्षमता आहे.
- तसेच जपान, यु.एस.ए., कॅनडा, श्रीलंका, इ. देशांमध्ये पेट्रोलियम कुड पासूनच्या नॅप्थापासूनचे सिंथेटिक अल्कोहोल खिण्हेजीससाठी उपयुक्त नसलेने या देशांमध्ये फरमेंटेड अल्कोहोलला खुप मोठ्या प्रमाणामध्ये मागणी आहे.

६) उत्पादन प्रक्रिया

आकृती १ उत्पादन प्रक्रिया



७) पर्यावरणविषयक दृष्टिकोन

लो.आ.दे.अ.भा.का.लि.यांनी अत्यंतप्रभावी व परिणामकारक अशी पर्यावरण व्यवस्थापन योजना (EMP) बांधविणेचे नियोजन केले आहे. त्यातील विविध घटक खालीलप्रमाणे आहेत.

अ) पाण्याचा वापर, झांडपाण्याची निर्मिती व त्याची प्रक्रिया

• पाण्याचा वापर

लो.आ.दे.अ.भा.का.लि.यांच्या भेदध्याच्या व प्रस्तावित प्रकल्पामध्ये होणा-या पाण्याच्या वापरविषयी अविस्तृत तपशील खालीलप्रमाणे -

तक्ता क्र.५ भाव्यर कावखाना प्रकल्पासाठी पाण्याचा वापर

| क्र. | तपशील | पाण्याची गरज (घनमीटर/दिन) |
|------|--------------------|---------------------------|
| १. | घरगुती | #२६ |
| २. | औद्योगिक | |
| | i. प्रोक्षेअ | *३९८ |
| | ii. कुलिंग | *८० |
| | iii. ऑयलर मेकअप | *१२० |
| | iv. डी.एम. प्लांट | *२४ |
| | v. वॉशिंग | *२ |
| | vi. अॅश कॅचिंग | *१ |
| | एकूण औद्योगिक वापर | *६२५ (१००% पूर्णवापर) |
| ३. | आगकाम | \$६३ |
| | एकूण | ६८८ (#२६+*६२५+\$६३) |

टीप # एकूण पाणी जे कोयना धरणामधून वापरले जाईल * ऊर्ध्वमधील कॅडेनोट
\$ एअर.टी.पी. व ई.टी.पी. मधून प्रक्रिया केलेले पाणी

तक्ता क्र.६ प्रस्तावित मोलॅसिअ व ऊर्ध्वाचा रस आभारणी प्रकल्पासाठी पाण्याचा वापर

| क्र. | तपशील | पाण्याची गरज (घनमीटर/दिन) | | ऊर्ध्वाचा रस |
|------|--|--------------------------------------|---------------------------------|-----------------------|
| | | ऊर्ध्व गळित हंगाम दरम्यान | पिना ऊर्ध्व गळित हंगाम | |
| १. | घरगुती | #३ | #३ | #३ |
| २. | औद्योगिक | | | |
| | i. प्रोक्षेअ | *७२० | *७२० | -- |
| | ii. कुलिंग | २७० (*१६६+\$३७+\$६७) | २७०(#२०३+\$६७) | ०२७० |
| | iii. ऑयलर मेकअप | #७२ | #७२ | ०७२ |
| | iv. डी.एम. प्लांट | #१५ | #१५ | ०१५ |
| | v. लॅण्ड व वॉशिंग | #५ | #५ | ०५ |
| | vi. अॅश कॅचिंग | #२ | #२ | ०२ |
| | एकूण औद्योगिक वापर | १०८४(*७८७+#२६०+\$३७) ७६%पूर्णवापर | १०८४(*७८७+#२९७) ७०%पूर्णवापर | ०३६४ १००%पूर्णवापर |
| ३. | हवितपट्टा | २२८(\$२२+Ω२०६) | Ω२२८ | Ω२२८ |
| | एकूण | १३१५(*७८७+#२६३+\$५९+Ω२०६) | १३१५(*७८७+#३००+Ω२२८) | ५९५(०३६४+#३+Ω२२८) |
| | ताज्या पाण्याचा वापर (प्रमाण १० कि.लि./ कि.लि. अल्कोहोल) | २.८ कि. लि. | ३.३ कि. लि. | ० कि. लि. |

टीप # : एकूण पाणी जे कोयना धरणामधून वापरले जाईल, * मोलॅसिअ अ.पी.यू मधून प्रक्रिया केलेले पाणी, \$: एअर.टी.पी. व ई.टी.पी. मधून प्रक्रिया केलेले पाणी, 0: ऊर्ध्वाचा रस अ.पी.यू मधील प्रक्रिया केलेले पाणी, Ω: रेनवॉटर हार्व्हिंग

ख. झांडपाणी प्रकिया

१. घरगुती झांडपाणी

लो. आ. दे. अ. आ. का. लि. प्रकल्पामधील आखर कारखाना आण आशयनी प्रकल्पामधुन २२.५ घनमीटर प्रतिदिन घरगुती झांडपाणी तयार होते. अथ्या तयार होणारे घरगुती झांडपाणी हे अेप्टीक टँक नंतर अोकपीट मध्ये प्रकिया केले जाते. आशयनी प्रकल्प उआरणी नंतर एकुण घरगुती झांडपाणी; प्रस्तापित घरगुती झांडपाणी प्रकिया प्रकल्पामध्ये (एअ.टी.पी.) प्रकियात केले जाईल य हरित पट्टया थिकाआआठी आपरले जाईल.

२. औद्योगिक झांडपाणी

अथ्याचा आखर कारखाना प्रकल्पातून १०६ घन. मी. प्रतिदिन इतके झांडपाणी तयार होते जे झांडपाणी प्रकिया प्रकल्पामध्ये प्रकियात केले जाते. झांडपाणी प्रकिया प्रकल्प हा प्राथमिक, द्वितीय य तृतीय अतरीय प्रकिया अअलेला आहे.

प्रस्तापित मोलॅअिअअअर आधारित आशयनी प्रकल्पांतर्गत एकुण ७२० घन.मी. प्रतिदिन इतका अॅ अॅटऑशा तयार होईल. अॅटऑशा एम.ई.ई. मध्ये इअॅपोरेट य कॉन्सनट्रेट केला जाईल. कॉन्सनट्रेटेड अॅटऑशा १४४ घन.मी. प्रतिदिन ड्राय करून पायडर केला जाईल. ही पायडर अत म्हणून आपरली जाते. केन अ्युअअर आधारित आशयनी प्रकल्पाआठी देअील हीच प्रकिया आपरली जाईल. (अॅ अॅटऑशा - ३६० घन.मी. प्रतिदिन य कॉन्सनट्रेटेड अॅटऑशा - ७२ घन.मी. प्रतिदिन)

प्रस्तापित आशयनी प्रकल्पांतर्गत तयार होणारे झांडपाणी हे अॅटलीअ, एम.ई.ई. मधील कंडेनअेट, ऑयलर अ्लो डाऊन, कुलिंग अ्लो डाऊन आण लॅअ, ऑशिंग ८३९ घन.मी. प्रतिदिन (मोलॅअिअअअर आधारित) य ४७१ घन.मी. प्रतिदिन (केन अ्युअअर आधारित) मधील झांडपाणी अअेल. अर्य झांडपाणी प्रस्तापित कंडेनअेट पॉलिशिंग युनिटमध्ये प्रकियात केले जाईल. प्रकियात झांडपाणी हे डायल्युशन य कुलिंग टॉअर मेकअअआठी आपरले जाईल.

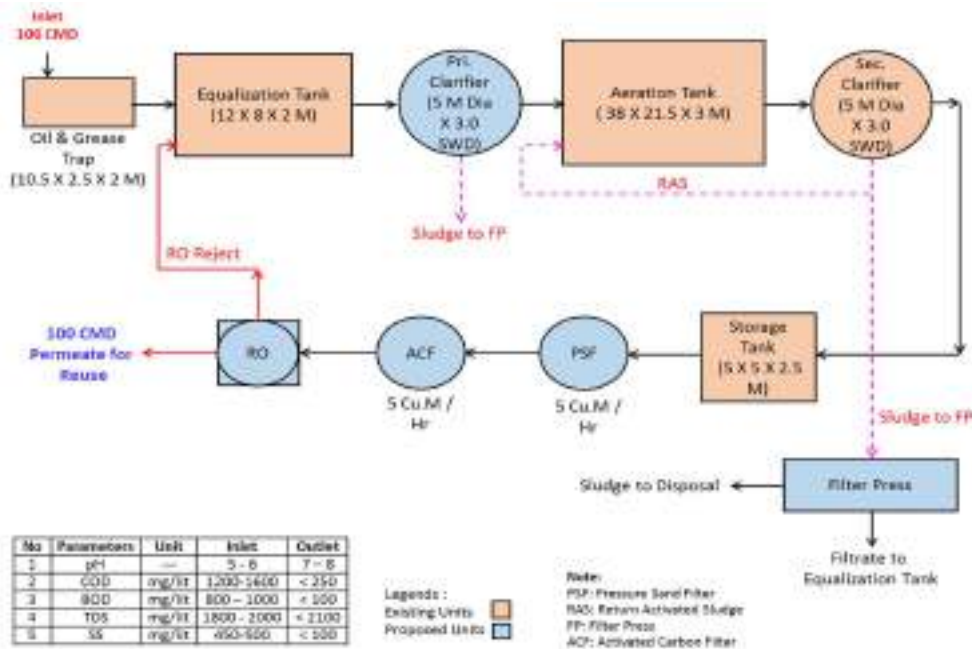
तक्ता क्र.८ आखर कारखाना प्रकल्पामध्ये तयार होणारे झांडपाणी

| क्र. | तपशील | झांडपाणी (घन. मी. / दिन) | प्रकिया |
|------|-------------------|--------------------------|--|
| १. | घरगुती | २० | प्रस्तापित घरगुती झांडपाणी प्रकिया प्रकल्पात प्रकिया केले जाईल. |
| २. | औद्योगिक | | |
| | १. प्रोअेअ | ४८ | आखर कारखान्याच्या अथ्याच्या औद्योगिक झांडपाणी प्रकिया प्रकल्पात प्रकिया केली जाईल. |
| | २. कुलिंग | ८ | |
| | ३. ऑयलर मेकअअ | २४ | |
| | ४. डी.एम. अॅकऑशा | २ | |
| | ५. लॅअ ऑशिंग | २४ | |
| | एकूण औद्योगिक आपर | १०६ | |

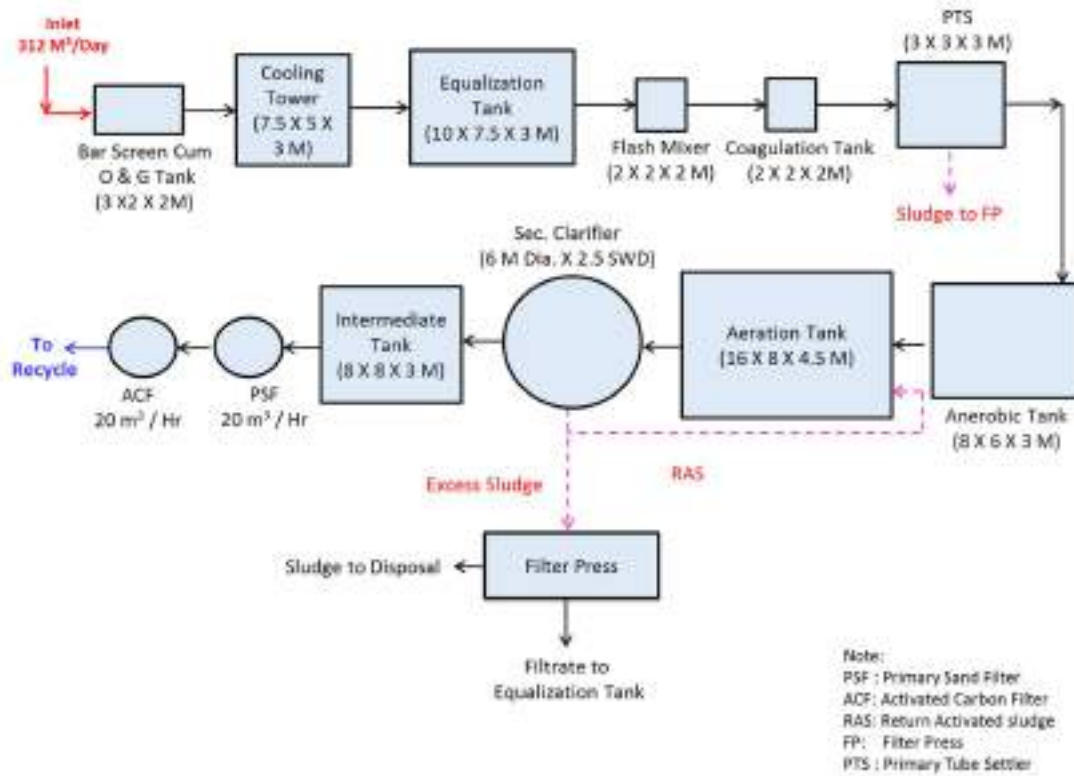
तक्ता १ आभषणती प्रकल्पाचे भांडपाणी

| क्र. | तपशील | भांडपाणी घन मी. प्रतिदिन | | प्रक्रिया |
|------|-------------------------------|---|---|---|
| | | मोलॅक्झिभ | केन ज्युभ | |
| १. | घरगुती | २.५ | २.५ | प्रस्तापित घरगुती भांडपाणी प्रक्रिया प्रकल्पामध्ये (एअ.टी.पी.) प्रक्रियीत केले जाईल. |
| २. | औद्योगिक | | | |
| | प्रोब्लेम | बॉ रपेंटवॉश - ७२० | बॉ रपेंटवॉश - ३६० | बॉ रपेंटवॉश एम.ई .ई मध्ये इव्हॅपोरेट व कॉन्सन्ट्रेट केला जाई ल. कॉन्सन्ट्रेटेड रपेंटवॉश ड्राय करून पावडर केली जाईल. |
| | | कॉन्स. रपेंटवॉश - १४४ (१.६ कि.ली) | कॉन्स. रपेंटवॉश - ७२ (०.८ कि.ली) | |
| | | कंडेनसेट - ६३४ (५७६ MEE + ५८ ड्रायब) | कंडेनसेट - ३१७ (२८८ MEE + २९ ड्रायब) | |
| | | रपेंट लीझ - १३० | रपेंट लीझ - ७९ | |
| | कुलिंग व्होडाऊन | ४० | ४० | अर्ब भांडपाणी प्रस्तापित कंडेनसेट पॉलिशिंग युनिटमध्ये प्रक्रियीत केले जाईल. |
| | ऑयलर व्होडाऊन | १५ | १५ | |
| | डि.एम.अॅकवॉश | १५ | १५ | |
| | लॅथ वॉशिंग | ५ | ५ | |
| | एकुण | कॉ. रपेंटवॉश -१४४ इतर भांडपाणी -८३९ | कॉ. रपेंटवॉश -७२ इतर भांडपाणी -४७९ | |
| | मानक : ८ कि.ली/कि.ली अल्कोहोल | १.६ | ०.८ | |

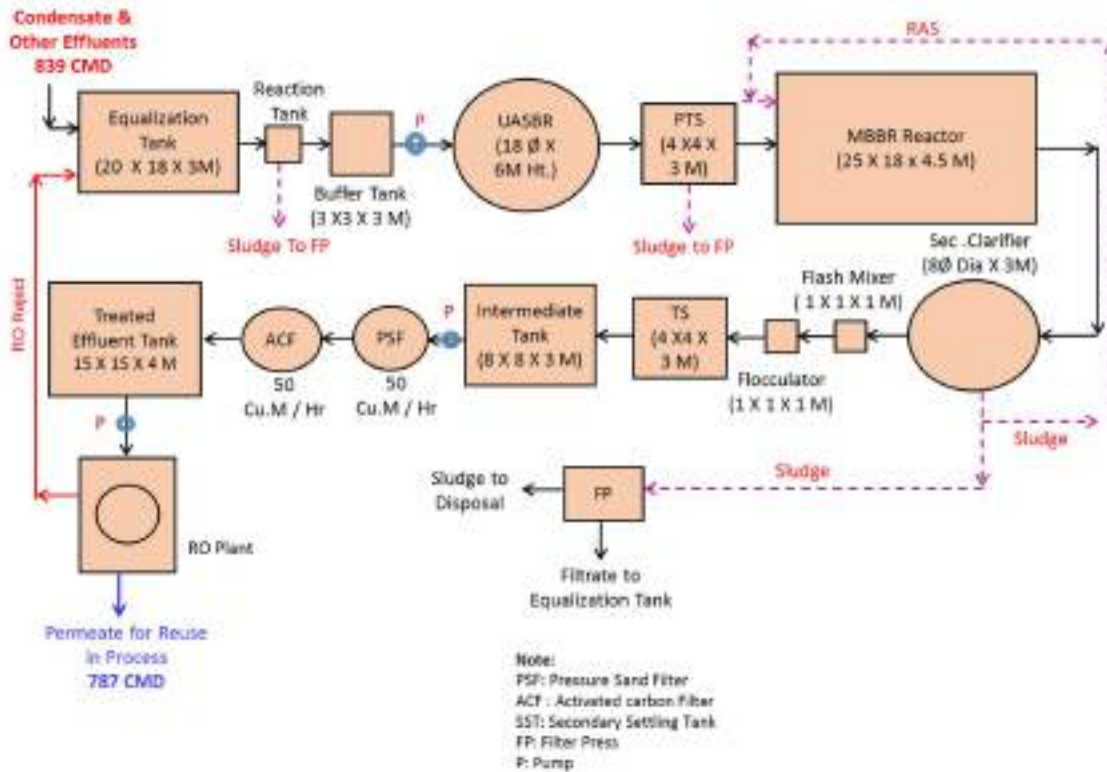
आकृती २ बाबबर कारखान्यातील मध्याचा ई.टी.पी. चा फ्लो चार्ट



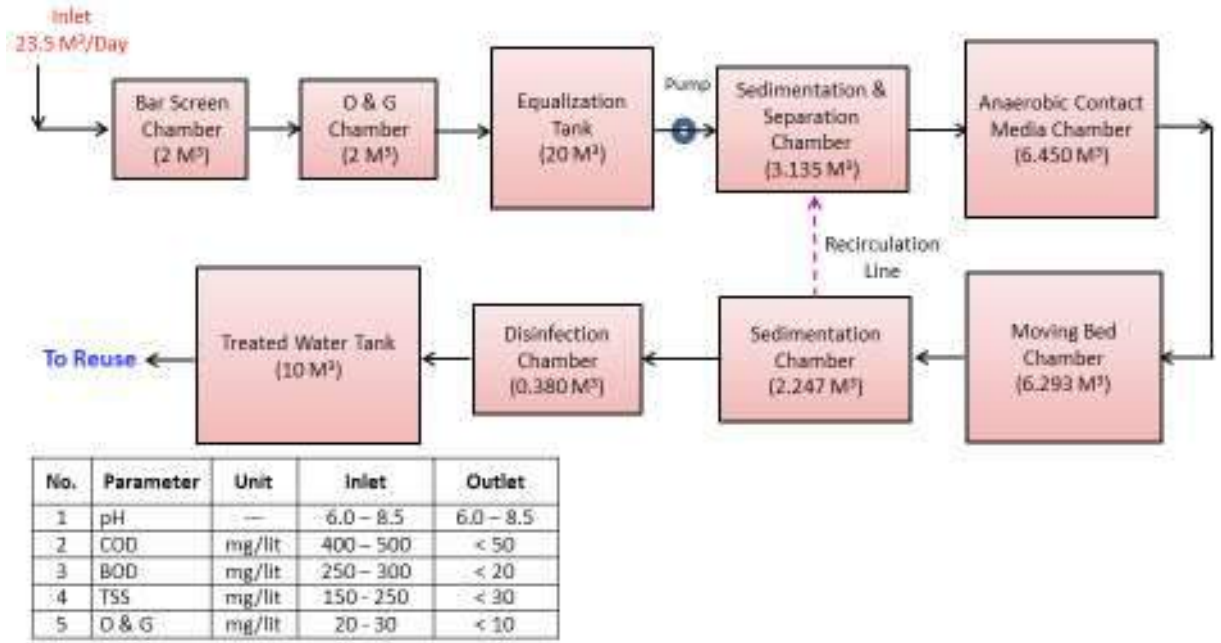
आकृती ३ झाखर कारखान्यातील प्रस्तावित बी.पी.यु. चा फ्लो चार्ट



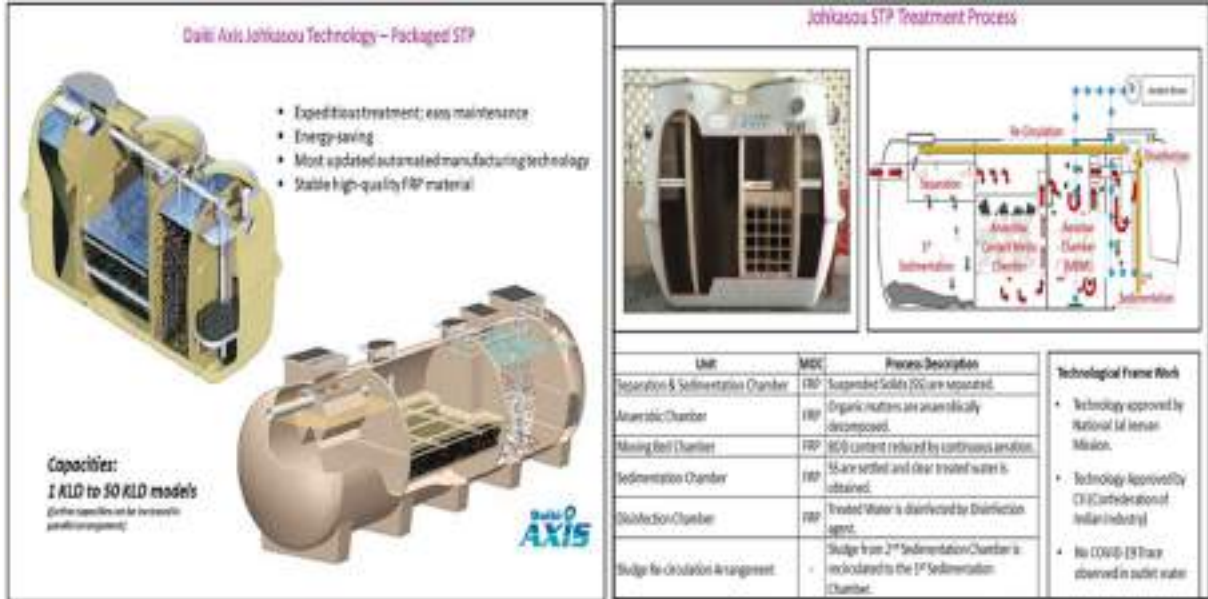
आकृती ४ आश्रयणी मधील प्रस्तावित बी.पी.यु. चा फ्लो चार्ट



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



आकृती ६ एअर.टी.पी. प्रक्रिया



क. वायु उत्सर्जन

अध्याय भाव्यर कारखाना प्रकल्पासाठी लागणारी वाफ ३० व २० टन प्रति तास क्षमतेच्या ऑयलर मधुन घेतली जाते. ज्यासाठी ६०० मे. टन. प्रतिदिन इतका अर्धश इंधन म्हणून वापरला जातो. पेट रकबर हे वायु प्रदूषण नियंत्रक उपकरण म्हणून वापरले आहे. तसेच ऑयलरसाठी ३५ मी. उंचीची चिमणी वापरली आहे.

३० टन प्रति तास क्षमतेचा ऑयलर प्रस्तावित आसण्याची प्रकल्पांतर्गत अंमलबजावणी जाईल. ज्यासाठी ३६० मे.टन.प्रतिदिन इतका अर्गॅस इंधन म्हणून वापरला जाईल व त्यासाठी ७५ मी. उंचीच्या चिमणी सहित ई.एस.पी. हे वायु प्रदूषण नियंत्रक उपकरण म्हणून वापरले जाईल. प्रस्तावित आसण्याची प्रकल्पासाठी लागणारी वाफ प्रस्तावित ३० टन प्रति तास क्षमतेच्या ऑयलर मधून घेतली जाईल.

ह्या प्रदूषण व त्यासंबंधीच्या इतर आधीची माहिती खालील तक्त्यात दिली आहे.

तक्ता १० ऑयलरचा व चिमणीचा तपशील

| क्र. | तपशील | भाखर कारखाना (अध्याचा) | | आसण्याची प्रकल्प (प्रस्तावित) | |
|------|--|------------------------|-------------------|-------------------------------|------------|
| | | ऑयलर | डी.जी.सेट | अध्याचा | अध्याचा |
| १ | क्षमता | ३० टन/तास | २० टन/तास | १६५ के.व्ही.ए. | ३० |
| २ | इंधनाचा प्रकार | अर्गॅस | अर्गॅस | डीझेल | अर्गॅस |
| ३ | इंधन (मे.टन/दिन) | ३६० | २४० | २०० लि./तास | ३६० |
| ४ | आंधणीसाठी वापरलेले मटेरीयल | आर.सी.सी | एम. एस. | एम. एस. | आर.सी.सी |
| ५ | आकार (गोल/चौरस) | गोल | गोल | गोल | गोल |
| ६ | उंची, मी (जमीनीच्या वर) | ३५ मी | ५ मी. | ५ मी. | ७५ मी |
| ७ | चिमणीला असलेले प्रदूषण नियंत्रणाचे उपकरण | पेट बॅकअप | अकॉस्टिक इनक्लोजर | ई. एस. पी. | ई. एस. पी. |

ड. ध्वनी प्रदूषण

१. ध्वनी निर्माण करणारे स्रोत

- फर्मन्टेशन सेक्शन व डिस्टिलेशन सेक्शन हे इतर थोड्या प्रमाणात आवाज निर्माण करणारे स्रोत असतील येथील ध्वनीची पातळी ७० ते ८० डी सी (ए) दरम्यान अपेक्षित आहे. या विभागात जवळी ध्वनी नियंत्रण साधने अंमलबजावणी येतील.
- अध्याचाच्या प्रकल्पांमध्ये ऑयलर हाऊस, टर्बाईन, ऊस गाळप विभाग इत्यादी ध्वनी प्रदूषणाचे स्रोत आहेत.
- कारखान्यासभोवती टप्प्याटप्प्याने हरित पट्टा विकसित केला जाईल जेणेकरून ध्वनी प्रदूषण नियंत्रणास मदत होईल.

२. नियंत्रण उपाय

ध्वनी नियंत्रणासाठी आयसोलेशन, सेपरेशन आणि इन्स्युलेशन तंत्रे वापरली जातील. इन्स्युलेशन, ई. अक्षररूपात कामगारांना वैयक्तिक सुरक्षा साधने (PPE) पुरविल्यात येतील. तसेच ध्वनीची पातळी कमी करण्यासाठी डी. जी. सेट अंतर कॅनॉपी मध्ये अंमलबजावणी 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 आसपनी प्रकल्प | ५.१ स्पेंट ऑईल | ०.०१२ | आधिकृत पुर्नधिकेता |

ड. घन स्वरूपाचा कचरा

अध्याच्या प्रकल्पांमधील वेगवेगळ्या विभागातून तसेच प्रस्तापित विस्तारीकरण प्रकल्पांमधून निर्माण होणाऱ्या घन स्वरूपाच्या कच-यामध्ये खालील आधीचा 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. र्लज | ०.१ | खत म्हणून वापरले जाईल. |
| | | बाख (अगॅस) | १८ | वीट निर्मितीसाठी साठी दिले जाईल / बिमेंट इंडस्ट्रीज / खत म्हणून वापरले जाईल. |
| २. | प्रस्तापित आसपनी | बाख (अगॅस) | ११ | खत म्हणून वापरले जाईल. |
| | | टीस्ट र्लज | २० | खत म्हणून वापरले जाईल. |
| | | सी.पी.यु. र्लज | ०.८ | खत म्हणून वापरले जाईल. |

वीट उत्पादकांशेखतचा कचरा आसपनी स्थापनेनंतर केला जाईल.

ड. वाशाचा उपद्रव

अदर प्रकल्पांतर्गत मोलॅसिअ हाताळणी व साठवणुक, फर्मन्टेशन व डिस्टीलेशन, सांडपाणी प्रकिया यंत्रणा, खराब मील सॅनिटेशन आणि दुर्लक्षित ड्रेन्स इ. वाशाच्या उपद्रवाचे स्रोत असतील. अध्या वाशाच्या नियंत्रणासाठी नीटनेटके हाऊसकिपींग, ई .टी.पी. युनिट मधील मैला व्यवस्थापन, ड्रेन्ससाठी खिलचींग पावडरचा वापर इ. आधी व्यवस्थित हाताळल्या जातील. प्रस्तापित प्रकल्पांतर्गत स्पेंटवॉश खंद नलिकेतुन हाताळणी, साठवणुकीसाठी व विल्हेवाटीसाठी नेले जाईल यामुळे होणारा वाशाचा उपद्रव कमी होईल.

भ. नियम व अटीचे पालन

अध्याच्या प्रकल्पांतर्गत महाराष्ट्र प्रदुषण नियंत्रण मंडळ (MPCB) किंवा तत्सम संस्थेमाफत सांडपाणी प्रकिया व विल्हेवाट, घातक स्वरूपाचा कचरा व घन कचरा हाताळणी व विल्हेवाट तसेच वायु क्लेअरने इ. संबंधित घालुन देण्यात आलेल्या सर्व कायद्यांचे व नियमांचे काटेकोरपणे पालन केले जाते. अदर कार्यपद्धती प्रस्तापित आसपनी प्रकल्पांतर्गत ही पाळली जाईल.

म. पर्यावरण व्यवस्थापन विभाग

लो.आ.दे.अ.सा.का.लि.मध्ये पर्यावरण व्यवस्थापन विभाग कार्यरत आहे. या विभागातील सर्व अदर उच्च शिक्षित आणि संबंधित क्षेत्रातील योग्य तो अनुभव असलेले आहेत. अध्याच्या व प्रस्तापित पर्यावरण व्यवस्थापन विभागामधील अदर खालीलप्रमाणे-

तक्ता क्र.१३ पर्यावरण व्यवस्थापन विभाग

| अनु.क्र. | पदाचे नाव | संख्या |
|-------------|-----------------------|-----------|
| १ | व्यवस्थापकीय संचालक | ०१ |
| २ | कार्यकारी अधिकारी | ०१ |
| ३ | उत्पादन व्यवस्थापक | ०१ |
| ४ | पर्यावरणीय अधिकारी | ०१ |
| ५ | सुरक्षा अधिकारी | ०१ |
| ६ | मुख्य सहायनशास्त्रज्ञ | ०१ |
| एकुण | | ०६ |

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

तक्ता क्र.१४ सध्याच्या व प्रस्तावित प्रकल्पांच्या देखभालीसाठीच्या खर्चाचा तपशील

| क्र. | तपशील | खर्च (रु. लाखांमध्ये) | |
|-------------|---|-----------------------|---------------------------|
| | | भांडवली गंतवणूक | वार्षिक देखभाल व दुर्भरती |
| अ | सध्याच्या सारखर कारखाना | | |
| १. | ऑयलरला हवा प्रदुषण नियंत्रणासाठी वेट रकषर व चिमणी, सारख सारखणे प्रणाली | ६५.० | १०.० |
| २. | जल प्रदुषण नियंत्रण ई.टी.पी. | ३०.० | १५.० |
| ३. | ध्वनी प्रदुषण नियंत्रण | २०.० | ५.० |
| ४. | घनकचरा मॅनेजमेंट | १०.० | ५.० |
| ५. | व्यवसायविषयक आसोस्य व सुरक्षीतता | १५.० | ५.० |
| ६. | हवित पट्टा विकार | ४०.० | ५.० |
| ७. | एन्व्हायरमेंटल मॉनिटरींग व मॅनेजमेंट | २५.० | १०.० |
| एकुण | | २०५.० | ५५.० |
| ख | प्रस्तावित आसवनी प्रकल्प | | |
| १. | हवा प्रदुषण नियंत्रक उपकरणे - ई.एस.पी, चिमणी व OCMS | ३५०.० | ३०.० |
| २. | जल प्रदुषण नियंत्रण - एम.ई.ई, आसवनी सी.पी.यु., सारखर कारखाना सी.पी.यु., एस्.टी.पी., डायर व OCMS | ६५०.० | ६०.० |
| ३. | ध्वनी प्रदुषण नियंत्रण | ५०.० | १५.० |
| ४. | व्यवसायविषयक आसोस्य व सुरक्षीतता | १००.० | ३०.० |
| ५. | हवित पट्टा विकार | ८०.० | ३०.० |
| ६. | वेन वॉटर हार्वेस्टिंग | ३०.० | १५.० |
| ७. | एन्व्हायरमेंटल मॉनिटरींग व मॅनेजमेंट | ५०.० | २०.० |
| एकुण | | १३१०.० | २००.० |

य) वेनवॉटर हार्वेस्टिंग संकल्पना

- प्रकल्पाचे एकुण क्षेत्र - २,८०,७९६ वर्ग मी.
- एकुण रिकामे क्षेत्र - १२,०९०.०४ वर्ग मी.
- सारखरी वार्षिक पाऊस - १,०४२ मिमी.

➤ कफटॉप हार्वेस्टिंग

- कफटॉप हार्वेस्टिंग क्षेत्र - ५५,१७५.०० वर्ग मी.
- कफटॉप हार्वेस्टिंग मधून मिळणारे पाणी - ४५,९०५ घन मी.

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

७) पर्यावरणविषयक तपासणी कार्यक्रम

अभ्यासासाठी निवडलेल्या भागाची पूर्ण पाहणी नोव्हेंबर २०२२ मध्ये करण्यात आली होती. प्रस्तावित प्रकल्पाच्या अंमलबजावणीच्या हवामान परिस्थितीच्या माहितीसाठी हवा, पाणी व मातीरूपरूप 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. याअंशधीची द्रव्यमान अंतरावरील माहिती ही अरकाशी 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. अंशधीत माहितीही विविध द्रव्यमान अंतरावरून जसे की जनगणना पुरविका, अरकाशी कार्यालये, सर्वे ऑफ इंडिया टोपोशीट्स, याचबरोबर सॅटेलाईट इमेजीस व जागेवरील प्राथमिक सर्वे इ. मधून घेण्यात आली आहे.

ख. अभ्यासासाठी निवडलेल्या जमीनीचा वापर / व्यापलेली जमीन

तक्ता क्र.१६ जमीनीचा वापर / व्यापलेली जमीन

| अ.क्र. | जमीनीचा वापर / व्यापलेलीजमीन | क्षेत्र (हेक्टर) | टक्केवारी(%) |
|-------------|------------------------------|------------------|--------------|
| १. | आंधकामाखालील जमीन | १३९६ | ४.४४ |
| २. | लागवडीखालील जमीन | ९६९३ | ३०.८५ |
| ३. | पडीक जमीन | ४४३५ | १४.१२ |
| ४. | नापीक जमीन | ६५९७ | १.७३ |
| ५. | जलस्रोत / नदी | ५४२ | २१.०० |
| ६. | अरक जमिन | ५४३६ | १७.३० |
| ७. | जंगल | ३३१६ | १०.५६ |
| एकूण | | ३१४१५.५० | १००.० |

क. हवामान माहिती

अदर पाहणीसाठी ब्युरो ऑफ इंडियन स्टॅण्डर्ड (BIS) आणि इंडियन मेट्रोलॉजी डिपार्टमेंट (IMD) यांनी नमूद केलेली मानके वापरली आहेत. हवामान परिस्थितीच्या माहितीसाठी वेगवेगळ्या हवामान घटकांचा अभ्यास प्रत्यक्ष जागेवरील केला गेला आहे. याअंशधीची विविध अंतरावरील अधिक माहितीही हवामान विभाग, आतास येथून घेण्यात आली आहे. त्यामध्ये तापमान, आर्द्रता, पर्जन्यमान इ. आदींचा समावेश आहे.

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

ड) हवेचा दर्जा

या विभागामधून नमुने घेतलेल्या ठिकाणांची निवड, नमुना घेण्याची पद्धत, पृथक्करणची तंत्रे आणि नमुना घेण्याची खात्रीयता इ. गोष्टींची माहिती दिली आहे. डिसेंबर २०२२ ते फेब्रुवारी २०२३ या कालावधी मधील निरीक्षणानंतरचे निकाल सादर केले आहेत. सर्व मॉनिटरींग असाइनमेंट्स, नमुने घेणे व त्यांचे पृथक्करण NABL व MoEFCC, New Delhi मान्यता प्राप्त तसेच ISO १००१ -२०१५ व OHSAS १८००१ - २००७ मानांकित मे. ग्रीन एन्वायरोन्मेण्ट इंजिनीअर्स अँड कन्सल्टंट्स प्रा. लि., पुणे या प्रयोग शाळेमार्फत केले आहे. अभ्यास क्षेत्रातील हवेच्या गुणवत्तेचे मूल्यमापन करण्यासाठी PM₁₀, PM_{2.5}, SO₂, NO_x व CO. या घटकांचे वेगवेगळ्या स्थानांवर मॉनिटरींग केले गेले. मॉनिटरींगची वेगवेगळी स्थाने खाली दिलेल्या तक्त्यामध्ये दाखवली आहेत.

तक्ता १७ अभ्युपतालची हवा गुणवत्ता परिक्षणाची (AAQM) स्थानके

| AAQM केंद्र आणि बांकेतांक | स्थानकाचे नाव | भाईट पाहूनचे अंतर (कि.मी.) | भाईटला अनुभाकन दिशा |
|---------------------------|---------------|----------------------------|---------------------|
| A1 | भाईट | - | - |
| A2 | कमबुंद | ५.७८ | पश्चिम |
| A3 | बुळेवाडी | ६.६८ | पश्चिम |
| A4 | पापडें | ४.७९ | पूर्व |
| A5 | बोनाईचीवाडी | २.३५ | पूर्व |
| A6 | लुगडेवाडी | ४.०४ | उत्तर |
| A7 | ढेढेवाडी | ५.८९ | दक्षिण |
| A8 | मबळी | १.४० | दक्षिण |

तक्ता १८ अभ्युपतालची हवा गुणवत्ता परिक्षणाची (AAQM) स्थानकांचा सारांश
[डिसेंबर २०२२ ते फेब्रुवारी २०२३]

| | | Location | | | | | | | |
|--|------|----------|--------|----------|--------|-------------|-----------|----------|-------|
| | | भाईट | कमबुंद | बुळेवाडी | पापडें | बोनाईचीवाडी | लुगडेवाडी | ढेढेवाडी | मबळी |
| PM ₁₀ µg/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} µg/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 µg/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 |
| NO _x µg/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 | | | | | | | |
|------------|----------|---------|----------|-------|-------------|-----------|----------|-------|
| | भाईट | कबाबुंद | भुळेवाडी | पापडे | भोनाईचीवाडी | लुगडेवाडी | ढेढेवाडी | मबळी |
| Avg | 0.440 | 0.023 | 0.024 | 0.025 | 0.024 | 0.027 | 0.027 | 0.029 |
| 98% | 0.200 | 0.024 | 0.024 | 0.030 | 0.024 | 0.030 | 0.030 | 0.030 |

Note: PM₁₀, PM_{2.5}, SO₂ 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 | | NO _x 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 |
| पर्यावरणदृष्ट्या संवेदनशील 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. वीन एनवायबोबेफ इंजिनीअर्स आणि झल्लागार प्रा.लि., पुणे यांच्या मार्फत नमुने घेऊन त्यांचे पृथक्करण केले. भूगर्भ भातील पाण्याच्या नमुना चाचणीसाठी ८ ठिकाणे व भूपृष्ठीय पाण्याच्या नमुना चाचणीसाठी ८ ठिकाणे घेतली होती.

तक्ता २० भूगर्भातील पाण्यासाठी निवडलेली ठिकाणे

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

तक्ता २१ पृष्ठभागावरील पाण्यासाठी निवडलेली ठिकाणे

| स्थानक संकेतांक | स्थानकाचे नाव | भाईट पासूनचे अंतर(कि.मी.) | भाईट पासूनची दिशा |
|-----------------|---------------|---------------------------|-------------------|
| SW1 | मबळी | ०.४० | नैऋत्य |
| SW2 | चोपदारवाडी | ०.६८ | वायव्य |
| SW3 | शिंदेवाडी | ४.२२ | पश्चिम |
| SW4 | गणहानवाडी | १.४२ | वायव्य |
| SW5 | सांगवड | १.७५ | वायव्य |
| SW6 | येरफळे | ४.५३ | वायव्य |
| SW7 | सांगवड | १.८५ | ईशान्य |
| SW8 | पापडे | ३.६३ | ईशान्य |

फ) ध्वनी पातळीचे अर्थेक्षण

ध्वनी पातळीचे अर्थेक्षणसाठी कारखाना परिवारास 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 भाकेतांक | स्थानकाचे नाव | साईट पासूनचे अंतर(कि.मी.) | साईट पासूनची दिशा |
|--------------------|-----------------|------------------------------|----------------------|
| N1 | साईट | - | - |
| N2 | विन्हेश्वरनगर | ०.५ | उत्तर |
| N3 | पापडे | ३.८ | पूर्व |
| N4 | दिवशी | ४.१ | आग्नेय |
| N5 | मरळी | १.४ | नैऋत्य |
| N6 | भोनवडे | ३.१ | नैऋत्य |
| N7 | खेलवडे बव्हर्डे | ३ | प्रायव्य |
| N8 | नववस्था | ३.४ | ईशान्य |

तक्ता २३ ध्वनी पातळी

| ठिकाणे | सरासरी ध्वनी पातळी (डेसिबल) | | | | | |
|---------------------|-----------------------------|------|------|----------|------------|------|
| | L10 | L50 | L90 | Leq(day) | Leq(night) | Ldn |
| साईट(N1) | ५२.५ | ५३.७ | ५७.९ | ५६.१ | ५२.५ | ५९.७ |
| विन्हेश्वरनगर(N2) | ४१.१ | ४६.८ | ४७.५ | ५३.१ | ४१.८ | ५२.६ |
| पापडे(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 |
| भोनवडे(N6) | ४२.७ | ४६.४ | ४७.९ | ५२.३ | ४१.८ | ५२.१ |
| खेलवडे बव्हर्डे(N7) | ४२.३ | ४६.४ | ४७.९ | ५२.६ | ४१.६ | ५२.३ |
| नववस्था(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 विकासास प्रकल्पामुळे कार्यक्षेत्रात राहणा-या लोकांच्या राहणी मानावर, सामाजिक व आर्थिक स्तरावर प्रभाव पडतो. याखद्दलची सापेक्षता माहिती ई. आय. ए. रिपोर्ट मधील प्रकरण ३ मध्ये आहे.

घ) पर्यावरण

Random Sampling व Oppurtunistic Method या पध्दतीचावापर करून त्या भागातील जैवविविधतेचा अभ्यास करणेत आला. दृष्टिक नमुना पध्दतीने ध्वनीपातळी आणि अंधीयुक्त ठिकाणे पाहणी पध्दती व मानक ठिकाणे गणती पध्दतीप्रमाणे प्राण्यांसाठी कार्यक्षेत्र अर्थेक्षण करण्यात आले. आयोटाच्या गुणात्मक अभ्यासासाठी दोषळ निरीक्षण पाहणी आणि अंदाज पध्दतीचा अवलंब करण्यात आला. स्थानिक पर्यावरण खदलाचे मासे व पक्षी हे चांगले निदर्शक असल्यामुळे त्यांचा अभ्यास करणेत आला.

वनस्पती मुख्यतः मोठ्या पर्गातील झाडांची ओळख व त्यांचे प्रमाण यांच्याकडे अभ्यास केंद्रित होता.

८) पर्यावरणावर होणारे परिणाम आणि त्यासाठीच्या उपाययोजना

अ. भौगोलिक रचनेवर परिणाम

अदरक प्रकल्पांतर्गत अंध्याच्या प्रकल्पामध्ये विस्तारीकरण होणार असलेने अंपादित जागेच्या भौगोलिक रचनेवर परिणाम अपेक्षित नाही. अदरक औद्योगिक प्रकल्पामुळे काही अकारात्मक फायदे जसे की जमिन विकसिकरण, व झाडे लावणे अपेक्षित आहे.

ब. वातावरणावरील परिणाम

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

क. हवेच्या दर्जावरील परिणाम

प्रकल्पामुळे होणा-या परिणामांची छाननी करण्यासाठी कारखाना परिक्षाक्ष केंद्र मानून त्यापाहून १० कि.मी. अंतराच्या परिघामध्ये येणारा भाग विचारात घेतला गेला आहे.

१. मुलभूत ऑम्बिएंट वायू प्रमाणके

डिसेंबर २०२२ ते फेब्रुवारी २०२३ मध्ये करण्यात आलेल्या कार्यक्षेत्र अर्पेक्षणा दरम्यान नोंद करण्यात आलेली २४ तासामधील ९८ पर्सेंटायल प्रमाणके आणि PM₁₀, PM_{2.5}, SO₂ व NO_x यांची अक्षोखतालच्या हवेमधील असाअशी यानुसार मिळालेल्या प्रमाणांना मुलभूत प्रमाणके मानण्यात आली आहेत. अदरक प्रमाणके परिक्षामध्ये होणार परिणाम दर्शवतात. अंध्याची मुलभूत प्रमाणके ई.आय.ए. रिपोर्ट मधीलप्रकरण ४ तक्षेच पुढील तक्त्यामध्ये मांडण्यात आली आहेत.

तक्ता २३ मुलभूत प्रमाणके (98 Percentile)

| तपशील | PM ₁₀ | PM _{2.5} | SO ₂ | NO _x | CO |
|----------------------------|-----------------------|----------------------|----------------------|----------------------|---------------------|
| Conc. (µg/m ³) | ६५.० | २५.० | १७.८ | २६.३ | ०.५५ |
| NAAQS | १०० µg/m ³ | ६० µg/m ³ | ८० µg/m ³ | ८० µg/m ³ | ४ mg/m ³ |

२. हवा प्रदुषणस्रोत

प्रस्तावित ३० टन प्रति तास क्षमतेचा ऑयलर हा आसयनी प्रकल्पासाठी वापरला जातो.

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

ड. जलस्रोतावरील परिणाम

१. भूपृष्ठीय जलस्रोतावरील परिणाम

आश्रयणी प्रकल्पातून तयार होणारे झांडपाण्यातील सॉ सॅप्टेज हे एम. ई. ई. मध्ये प्रकिया केले जाईल. कॉन्सन्टेंटेड सॅप्टेज ड्रायमध्ये प्रकिया केले जाईल व त्यापासून पावडर तयार होईल. आकीचे झांडपाणी हे प्रकिया करण्यासाठी सी.पी.यू. मध्ये पाठवण्यात येईल. प्रकिया केलेले पाणी हे ZLD साठी वापरले जाईल. घरगुती झांडपाणी हे प्रस्तावित एअ. टी. पी. मध्ये प्रकिया करण्यासाठी पाठवण्यात येईल. अधिक माहिती ई.आय.ए. रिपोर्ट मधील प्रकरण क्र. २ मध्ये देण्यात आली आहे.

२. भूगर्भीय पाण्याच्या गुणवत्तेवर होणारा परिणाम

प्रकल्पासाठी लागणारे जखरी पाणी हे कोयना नदीमधून घेण्यात येईल. प्रस्तावित विस्तारीकरण अंतर्गत भूजलाचा वापर होणार नाही. या अर्थी, कारखान्यामधून कोणत्याही प्रकारचे अप्रकियात झांडपाणी विस्तारित होणार नाही. त्यामुळे भूजल पाणी पातळीवर व गुणवत्तेवर कोणताही परिणाम होणार नाही.

इ. माती वर होणारे परिणाम

मातीच्या गुणधर्मावर होणारे परिणाम हे आधारापणे वायू उत्सर्जन, झांडपाण्याचे आणि घनकचरा विनियोगांमुळे होत असतात. आध्याच्या आखर कारखान्या प्रकल्पातून वर उल्लेख केलेले घटक विस्तारित होणार नाहीत. ऑयलबर्ना ई. एअ. पी. व पेट बकवर अक्षयिले आहेत. ऑयलरची राख व ई.टी.पी. बलजस्पात घनकचरा निर्माण होईल. ऑयलरची राख पीट निर्मितीसाठी दिली जाईल व ई.टी.पी. बलज पृक्षापनासाठी खत म्हणून वापरली जाईल. घरगुती झांडपाण्यावर प्रस्तावित झांडपाणी प्रकिया केंद्रात प्रकिया केली जाईल. त्यामुळे वायु प्रदूषके अथवा झांडपाण्यामुळे जमिनीच्या रासायनिक घटकांमध्ये कोणताही मोठा बदल होणार नाही.

फ. ध्वनी मर्यादेवर होणारा परिणाम

अतिध्वनी निर्माण करणा-या यंत्रावर काम करीत असणा-या कामगारांचे अंतुलन शिघ्रतून कामावर परिणाम होण्याची शक्यता असते. ध्वनी निर्माण होणाऱ्या स्रोताजवळ असणाऱ्या लोकांची ऐकण्याची क्षमता कमी होऊ शकते. शब्द प्रकल्पामध्ये मुख्यतः आखर कारखान्यातील मील, कॉम्प्रेसर, ऑयलर, टर्बाइन व डि.जी. सेट हे ध्वनी प्रदूषणाचे मुख्य स्रोत ठरतील. शब्द प्रकल्प हा ध्वनी प्रदूषण करणारा नाही.

ग. जमीन वापरावर होणारा परिणाम

प्रस्तावित आश्रयणी प्रकल्प हा आध्याच्या आखर कारखान्यामध्ये करण्यात येणार आहे. शब्द जागेचा औद्योगिक कारणांसाठी वापर करण्यात येत आहे यामुळे जमीन वापरामध्ये बदल अपेक्षित नाही.

घ. झाडांवर व प्राण्यांवर होणारा परिणाम

प्रकिया न केलेले झांडपाणी कारखान्याच्या आभोवताली विस्तारित केल्यास पाणी अंधा व त्यावर अवलंबून असलेली जैवविविधतेवर परिणाम आभोवतो. वायु प्रदूषणा अंधर्भात कारखान्या SPM च्या स्वरूपात प्रदूषण योगदान देऊ शकतो. याचा विपरीत परिणाम अंशतः पक्षी, आभोवतालची पीके आणि आध्यानिक लोकांवर होऊ

शकतो. झाडांवर व पाण्यावर होणारा परिणामांची माहिती ई.आय. ए. रिपोर्ट मधीलप्रकरण मध्ये देण्यात आलेली आहे.

घ. ऐतिहासिक ठिकाणावर होणारा परिणाम

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

१) पर्यावरणीय व्यवस्थापन आराखड्याची ठळक वैशिष्ट्ये

पर्यावरणीय व्यवस्थापन आराखड्याची ठळक वैशिष्ट्ये 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, आसपानी प्रकल्पाजवळ) अभ्यासक्षेत्र (बाईट, कबरुंद, बुळेवाडी, पापडे, भोनाईचीवाडी, लुगडेवाडी, देळेवाडी, मरळी) | PM ₁₀ , PM _{2.5} , SO ₂ , NO _x , CO | मासिक | MoEFCC & NABL approved Laboratory मधुन |
| २. | चिमणीतुन होणारे उत्सर्जन | ऑयलरच्या १ चिमणी, डी.जी. बेटची २ चिमण्या | SO ₂ , SPM, NO _x | मासिक | |
| ३. | ध्वनिगुणवत्ता | मेनगेट जवळ, किण्वन विभाग, आखर गोदाम, ऑयलर, डी. जी. बेट, टर्बाइन विभाग, ऑटोमेटिक ऑक्सिड विभाग | Spot Noise Level, recording; Leq(n), Leq(d), Leq(dn) | मासिक | |
| ४. | पिण्याचे पाणी | कारखान्याचे उपहारगृह / प्लाहत | Parameters as drinking water standards IS10500 | मासिक | |
| ५. | जमीन | अभ्यास क्षेत्रामधील ठिकाणे ८ ठिकाणे S1 मरळी S2 डावरी S3 भांगवड S4 येरफाले S5 भुतावरवाडी S6 नातोशी S7 खिलारवाडी S8 पाटण | PH, Salinity, Organic Carbon, N.P.K. | मासिक | |
| ६. | पाण्याची गुणवत्ता | अभ्यास क्षेत्रामधील ठिकाणे (भुगर्भीय पाणी- ८ ठिकाणे) GW1 GW2 GW3 | Parameters as per CPCB guideline for water quality monitoring – MINARS/27/ | त्रैमासिक | |

| क्र. | तपशील | ठिकाण | परिमाणे | पारंपारता | तपावणी |
|------|---|---|--|-------------------|--|
| | | GW4 GW5 GW6 GW7 GW8 (पृष्ठभागावरील पाणी- ७ ठिकाणे) SW1 मरळी SW2 चोपदारव्याडी SW3 शिंदेवाडी SW4 गवहानवाडी SW5 भांगवड SW6 येवफाले SW7 भांगवड SW8 गणेशवाडी | 2007-08 | | |
| ७. | भांडपाणी | 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 पैशिष्टे आणि रुपानुसार व्यवस्थापन केले जाईल | कच-याचे निर्मि ती, प्रक्रिया आणि विल्हेवाट यांची नोंद | वर्षातून दोनदा | लो. छा. दे. स. सा. का . लि. यांचेकडून |
| ९. | आपातकालीन तयारी जसे की आग व्यवस्थापन | प्रतिबंधात्मक उपाय महणून आगीच्या व स्फोट होणाऱ्या ठिकाणी आगीपासून संरक्षण आणि सुरक्षिततेची काळजी घेतली जाईल. | ऑनसाईट ई मरजवशी व संकटकालीन आहेर पडण्याचा आराखडा | वर्षातून दोनदा | |
| १०. | आरोग्य | कारखान्याचे कामगार आणि स्थलांतरीत कामगारांसाठी आरोग्य शीथीचाचे आयोजन | सर्व आरोग्यविषयक चाचण्या | वर्षातून दोनदा | |
| ११. | हरीतपट्टा | कारखान्याच्या परीसरांमध्ये आणि शेजारील गावांमधला | झाडे जगण्याचा दर | तज्ञानुसार | लो. छा. दे. स. सा. का . लि. यांचेकडून |
| १२. | सी. ई. आर. | निर्देशाप्रमाणे | -- | सहा महिण्यातून | |

१०) इतर अभ्यास

आपत्ती व्यवस्थापन

आपत्ती व्यवस्थापन करताना, खालीलपैकींचा विचार केला जातो

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

२. प्रकल्पामध्ये काम करणा-या कामगारांना शोजाशी राहणा-या लोकांपेक्षा जास्त धोका अपेक्षित आहे, यामुळे प्रकल्पामध्ये काम करणा-या कामगारांना अंभाष्य धोक्यापासून रक्षणाचे ट्रेनिंग दिले गेले पाहिजे जेणेकरून अंभाष्य धोके कमी होतील.

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

१. प्रकल्पास धोका: जेव्हा जिपीतास कमीतकमी धोका असतो व तो धोका पुढे कमी करणे शक्य होत नाही यापेळी ह्या धोक्यास प्राथमिकता दिली गेली पाहिजे. साअंतगत अंभाषित पिल्लीय नुकसानीच्या धोक्याचा विचार केला जातो.
२. कामगार व जनतेस धोका: फेटल अॉक्सीडेंट बेट (एफ. ऐ. आर) किंवा फेटल अॉक्सीडेंट फिक्सेड बेट (एफ.ऐ.एफ.आर) याचा वापर कामगार व जनतेस धोके यांचा अश्यास करताना वापर केला जातो. एफ.ऐ. आर व एफ.ऐ.एफ.आर म्हणजेच औद्योगिक अपघातांमध्ये १००० लोकांमागे होणा-या अपेक्षित मृतांची संख्या होय.

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

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

Government 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 for selecting 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 than 1,500 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 health 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 Commitment (ESC)

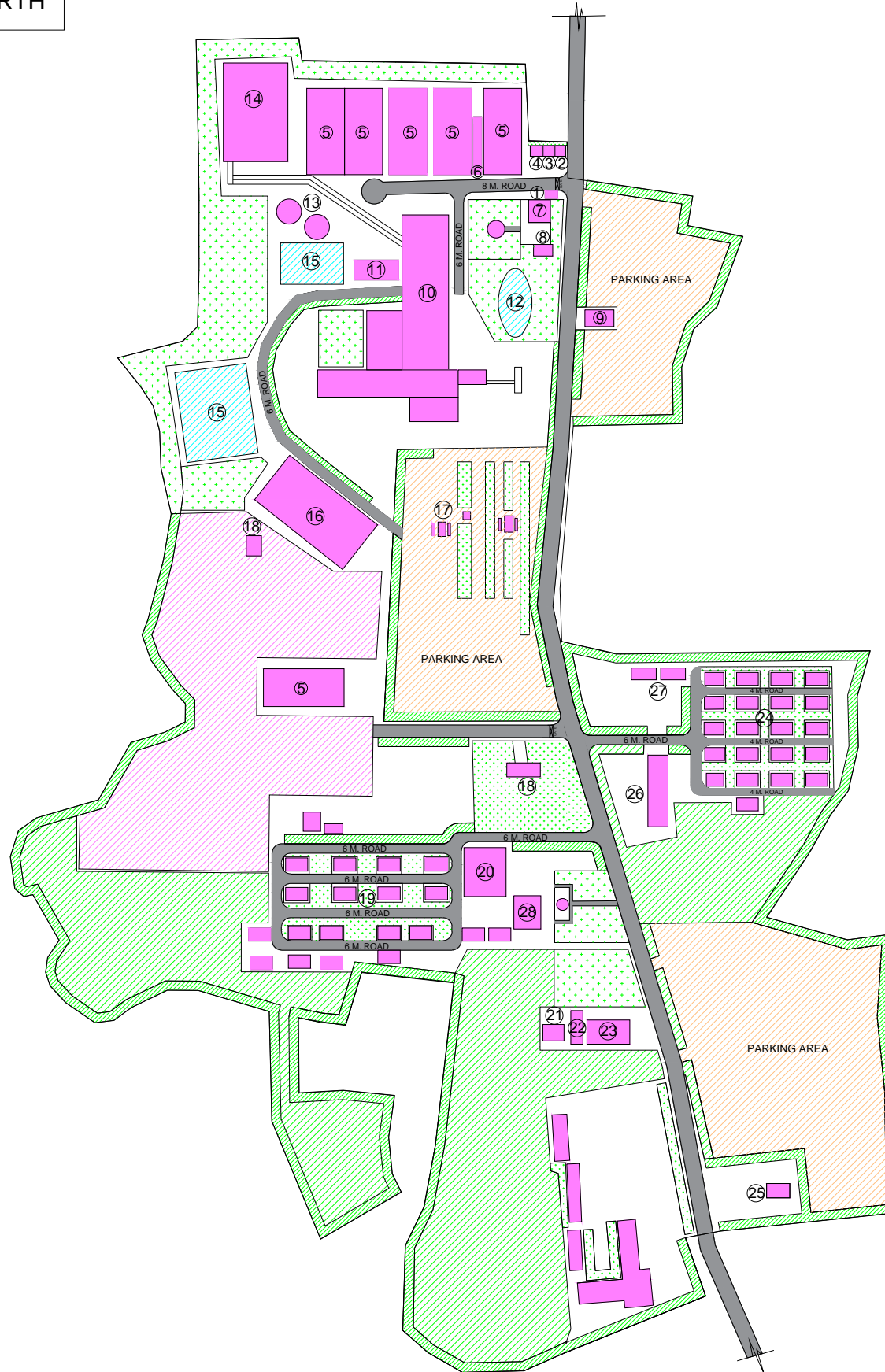
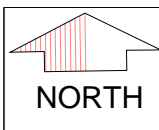
i. Adequate funds (at least 2.5 % of the project cost) shall be ear marked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan shall be included. Socio-economic development activities need to be elaborated upon.

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



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./कोसिवि/बिसि/२४०५ /२०२२
कार्यकारी अभियंता, कोयना सिंचन विभाग,
कोयनानगर ता. पाटण, जि. सातारा (४१५ २०७)
यांचे कार्यालय दिनांक :- १० / ०९ / २०२२

प्रति,

उपविभागीय अभियंता,
कोयना सिंचन उपविभाग,
क्र.१ सातारा.

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

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

उपरोक्त विषयासंबंधित संदर्भ क्र. २ अन्वये 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 वार्षिक कोठ्यास शर्ती व अटीवर मान्यता देणेत आली आहे.

संदर्भ क्र. ५ चे अनुशंगाने लोकनेते बाळासो देसाई सहकारी कारखान्याचे करारनाम्यास व पाणी कोठ्यास मंजूरी देणेत येत असून संदर्भ क्र. ४ चे पत्रा मधील अटी व शर्ती लागू राहतील त्यानुसार उपविभागाने कार्यवाही करून अनुपालन अहवाल सादर करावा.

सोबत - करारनामा २ प्रति.

स्थळ प्रत मंजूर


उपकार्यकारी अभियंता
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.



शाखाधिकारी

पाटबंधारे शाखा पाटण

साहकारी खरेदी-विक्री संघ इंगारत रामापुर, पाटण

ता. पाटण जि. सातारा पिन- ४१५२०६



जा.क्र./मा.शा./पाटण/ १९२/२०२२

दि. २०/१२/२०२२

प्रति,

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

विषय:- बिगर सिंचन पाणीगट्टी बीलाबाबत.

उपरोक्त विषयांस अनुसरून कळविणेत येते की, आपणांस औदयोगीक व पिणेसाठी पाणी कोठा मंजूर 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 कोठ्याप्रमाणे करणे आपणांस बंधनकारक आहे. वापर कमी किंवा जास्त झाल्यास महाराष्ट्र जलसंपत्ती प्राधिकरण 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. & L. | |
| Daulatnagar | |
| Inward No. | १९६० |
| | १३/१२/२०२३ |
| Forward to - | CE |
| | |
| | Managing Director |

महाराष्ट्र MAHARASHTRA

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ZU 666333

महाराष्ट्र शासन - II

7032

मे

शुभे प्रभावंत पाहव
श. तखळे
पाणी कार नामा.

900

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 (VI 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 to 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 Municipalities 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.

3
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 | Total sanctioned quota | 0.3419 |
| 1.1 | For Industry Using Potable water bottling plant | |
| 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 30th 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 58

- 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 from 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 fails 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 case 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 WHEREOF 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 -

2. Shri Rajaram Ramchandra Patil.-

3. Shri Suhas Laxman Desai -



[Signature]

Chairman.

[Signature]

Vice Chairman.

[Signature]

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-

[Signature]

Director

2. Shri Pandurang Annaso Nalwade -

[Signature]

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-

1. *[Signature]*

शाखाधिकारी
पाटबंधारे शाखा पातण

2. -----

[Signature]

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

मंजूर

[Signature]

Executive Engineer
Koyana Irrigation Division
Koyananagar.

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LIC. 333. NO. 1/25/1-246/70-10

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

New Delhi, the 19th September, 1970.

An application dated the 26th December, 1968 for a licence having been received from M/S. Bal-gopal Desai & Sons, Sakhar Karkhana Ltd., Satara, for establishing a new industrial undertaking at Marali Sangvad, Taluka Satara, District Satara, Maharashtra State, for the manufacture of sugar under Rule 7 of the Registration and Licensing of Industrial Undertakings Rules, 1962 the Central Government in exercise of the powers conferred by Rule 15(3) 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 1,350 (One thousand two hundred 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 Sangvad, Taluka Satara, District Satara, Maharashtra State.

(Signature)

(S. Ganeshpandian)

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



ST. 1/1/70
महानगर कार्यालय
कारखाना लि. दौलतनगर- ४१५ २११
४४ पाटण वि. 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 licence for the class 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 raw 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 Schedule 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.

LIC. 323. NO. 1/25/1-246/70-10

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

New Delhi, the 19th September, 1970.

An application dated the 26th December, 1968 for a licence having been received from M/S. Bal-gopal Desai & Sons, Sakhar Karkhana Ltd., Satara, for establishing a new industrial undertaking at Marali Sangvad, Taluka Satara, 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(3) 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:-

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

(Handwritten Signature)

(S. Ganeshpandian)

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



ST. 1/10/70
महानगर विकास विभाग
कारखाना लि. बालासागर- ४१५ २११
४१ पाटण वि. सातारा.

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