

Executive Summary

ENVIRONMENTAL IMPACT ASSESSMENT STUDY FOR PROPOSED NEW 50 KLPD MOLASSES BASED DISTILLERY CUM ETHANOL PLANT & EXPANSION OF EXISTING SUGAR MILL FROM 2500 TCD TO 5000 TCD & COGENERATION PLANT FROM 12 MW TO 22 MW CAPACITY AT SY.NO. 234, VILLAGE- RAJEWADI, TAL- ATPADI, DIST- SANGLI, MAHARASHTRA

Project Proponent

SADGURU SRI SRI SAKAR KARKHANA LTD.



MANTRAS GREEN RESOURCES LTD.

Hall No.1, First Floor, NICE Sankul, Plot No. A-9,
Opp.-Nashik Merchant Co-op Bank Ltd., ITI Signal, MIDC Satpur, Nasik-420007
Phone: +91-253-2355665, 2370086; Fax No.: +91-253-2316781
E-mail: Info@mantrasresources.com uksharma@mantrasresources.com

TABLE OF CONTENTS

Sr. No.	Title	Page No.
1.0	Introduction	1
1.1	Plant Capacity and Project Cost	1
1.2	Screening Category	3
1.3	Project Location and Environmental Setting	3
1.4	Manufacturing Process	5
1.5	Description of the Environment	9
1.6	Anticipated Environmental Impact and Mitigation Measures	11
1.7	Analysis of Alternative Site	13
1.8	Environmental Monitoring Plan (EMP)	13
1.9	Additional Studies	14
1.10	Manpower Requirements	14
1.11	Project Benefits	14
1.12	Environmental Cost Benefits	14
1.13	Environment Management Plan	15
1.14	Conclusion	15

LIST OF TABLE

Table No.	Title	Page No.
1	List of Products and By-Product for Proposed 50 KLD Molasses based Distillery	2
2	List of Product & By- Product from Existing Activity	2
3	Project and Environmental Settings	3
4	EMP Budget	15
5	CSR Budget Plan	16

LIST OF FIGURE

Figure No.	Title	Page No.
1	Sugar Manufacturing Process	5
2	Cogen Process Flow Diagram	6
3	Molasses Based Operation of Distillery	9

1.0 Introduction

M/s Sadguru Sri Sri Sakhar Karkhana Limited (SSSSKL/Project Proponent) is an existing public limited company. Its business activities are in the manufacture of white crystalline sugar from sugar cane. It is an agro-based industry. Present/existing range of products and their by-products are white crystalline sugar 275 MT/day, bagasse 750 MT/day, press mud 100 MT/day, molasses 112 MT/day and electric power 12 MW. Out of these by-products bagasses is used for power generation. Other two by-products viz. molasses can be used for producing alcohol and press mud can be utilized composting distillery effluent spent wash to ensure zero effluent discharge from distillery. Hence the company now wishes to install a distillery unit of 50 KLPD capacity utilizing molasses as raw materials.

The existing 2500 TCD sugar mill along with 12 MW cogeneration plant has been in used with latest Consent to Operate No. Format 1.0/BO/CAC-CELL/KP-17568-15/R/CAC-14581 dated 19.11.2015 under section 26 of the Water (prevention and Control of pollution Act) 1974 and under section 21 of Air (Prevention and Control of Pollution) Act 1981 and Authorization under Rule 5 of the Hazardous waste (M. H. & T.M.) Rules, 2008 was granted for a period from 01.08.2015 to 31.07.2016.

M/s Sadguru Sri Sri Sakhar Karkhana Ltd retained Mantras Green Resources Limited (MGRL) Nasik to carry out EIA study of this proposed project. MGRL has prepared application documents consisting of Basic Information, Form-1 and Prefeasibility Report and applied to MoEF for obtaining "TOR" for the project. MoEF allotted "TOR" for the proposal in 9th Meeting of Expert Appraisal Committee held between 27th–28th June, 2016 under item No. 9.7.9. Ref. No. IA/MH/IND2/54022/2016 DATED 23rd May, 2016.

1.1 Plant Capacity and Project Cost

M/s Sadguru Shri Shri Sakhar Karkhana Limited proposes to install a 50 KLPD Molasses based Distillery cum Ethanol Plant and expansion of existing Sugar Mill from 2500 TCD to 5000 TCD and Cogeneration Plant from 12 MW to 22 MW capacity adjacent to the existing sugar plant over an extent of 40 acres. The distillery plant will be designed keeping in view the CPCB's guidelines on

Corporate Responsibility for Environmental Protection (CREP) where zero discharge in surface water / ground water has been stipulated. **Table 1** indicates the list of products and byproducts of the distillery.

Table 1: list of products and by product for proposed 50 KLD molasses based distillery

S. No.	Name of the Products	Quantity
Products		
1.	Fuel Ethanol OR Extra Neutral Alcohol /Rectified Spirit	50 KLD
2.	Impure Spirit	2.25 KLPD
By-products		
1.	Bio -compost	28 MT/day
2.	CO ₂ generation	38 TPD
3.	Biogas	22000 Nm ³ /day

Products and by-products allowed to be produced as per the latest Consent to Operate issued with No. Format/1.0/BO/CAC-CELL/KP-17568-15/R/CAC-14581 dated 19-11-2015 presented in

Table 2

Table 2 : List of Product & By- Product from Existing Activity

S. No.	Name of Products and By-products	Capacity
Products		
1.	Sugar Mills	2500 TCD
2.	Co-generation Power Plant	12 MW
By-products (Maximum Production)		
1.	Sugar (8250 MT/month)	275 MT/day
2.	Bagasse (22500 MT/month)	750 MT/day
3.	Press mud (3000 MT/month)	100 MT/day
4.	Molasses (3375 MT/month)	112 MT/day
5.	Electric Power	12 MW

Distillery plant along with cogeneration plant will be implemented at a cost of Rs 111.62 Crores, out of which about Rs 818 lakhs allocated as capital cost and Rs.142 lakhs as recurring cost has been budgeted for implementing the Environmental Management Plan. Under CSR Plan, an amount of Rs.100 lakhs have been allocated for village development and livelihood of the people.

1.2 Screening Category

The Ministry of Environment and Forests (MoEF) Government of India has issued an EIA Notification; S.O. 1533 dated 14 September 2006. As per the EIA Notification and its subsequent amendments, Distillery projects are categorized under **5(g)** of schedule of activities. As the proposed distillery project is molasses based, it comes under **category "A"**. Therefore, require prior Environmental Clearance from the Expert Appraisal Committee/Authority (EAC), MoEF&CC, New Delhi.

1.3 Project Location and Environmental Setting

The proposed plant site is located in Survey No. 234, near Village - Rajewadi, Taluka-Atpadi, Dist-Sangli, State Maharashtra, India- 415 315. Pandharpur Railway Station is at a distance of 42.5 km from the plant site. Brief description about the nature, size and location of the project is given in **Table 3**.

Table 3: Project and Environmental Settings

1.	Nature and Size of the project	Proposed New 50KLPD Molasses based distillery cum Ethanol plant and expansion of existing sugar mill from 2500 TCD to 5000 TCD, Cogeneration plant from 12MW to 30MW by Sadguru Sri Sri Sakhar Karkhana Ltd (SSSKL).
2.	Location	
	Survey. No.	234
	Village	Rajewadi
	Tehsil	Atpadi
	District	Sangli
	State	Maharashtra -415 315
	Latitude and Longitude	Latitude- - 17°36'40.17" N and Longitude – 74°55'00.56" E
	Toposheet No.	47K/14 (1:50000 scale)
3.	Area	
	Total Plot Area	103.6 acres
	Proposed Distillery Area	4.0 acres
4.	Environmental Setting Details (with approximate aerial distance and direction from the	

	project site)	
	Nearest Town	Mhaswad, 13.7 km [North-West]
	Nearest village	Rajewadi, 3.5 km [South]
	Nearest Highway	SH-74- Satara- Pandharpur Road 5.9 km (North)
	Nearest Railway Station	Pandharpur, 42.5k [East]
	Nearest Airport	Solapur, 107 km[East]
	National Parks/ Wild Life Sanctuaries/Biosphere Reserves/RF and PF within 10km radius	There are no National Parks/Wild Life Sanctuaries/Biosphere Reserves within 10 km radius area of project site Reserve Forest: Reserved Forest – 5.4 km [NW] Reserved Forest – 6.2 km [SE]
	Nearest Water Bodies	Mhasvad Talav (Dam) - 5.6 km [SW] Sulewadi Talav : 4.7 km [NW] Manganga River : 6.0 km[South] Kalamwadi Talav : 9.0 km [NE]
5.	Project Cost	
	Exiting sugar mill & co-gen plant	Rs. 111.62 Crores
	Proposed Distillery cum ethanol plant	Rs. 35 Crores
	Expansion of sugar mill & co-gen plant	Rs. 80 Crores
6. Basic Requirements of the Project		
	Fresh Water (KLPD)	Distillery Unit : 487 KLPD Sugar Plant of 5000 TCD & Co-gen plant of 22 MW: 277 KLPD
	Fuel	Bagasse
	Fuel Consumption	300 MT/day
	Manpower Required	Proposed Distillery: 45 Nos. Proposed sugar and co-gen expansion = 190 Nos.
	Boiler Capacity	50 TPH
	Power requirement	5000 TCD Sugar Mills and 22 MW Cogen Plant : 8 MW 50 KLPD Distillery Unit: 1.5 MW (Supplied exiting cogeneration plant)
7. Interlinked Project		
	Products	Existing Sugar mill – 2500 TCD Cogeneration plant : 12 MW
	Byproduct	Molasses – 3375 MT/month (113 MTD) Bagasse – 22500 MT/month (750 MTD) Press mud - 3000 MT/month (100 MTD)

1.4 Manufacturing Process

1) Sugar & Cogeneration Process

Sugarcane is weighed, washed, cut, shredded and fed to series of mills. Sugar cane juice is extracted and bagasse is separated. Juice is heated and clarified. Mud is separated out and clarified juice is subjected to multiple effect evaporators. Concentrated syrup is fed to vacuum pan where syrup gets super saturated and fine crystals start forming. Crystals and mother liquor are separated in centrifuges. Raw sugar is dumped on moving belt where it gets dried before moving to storage.

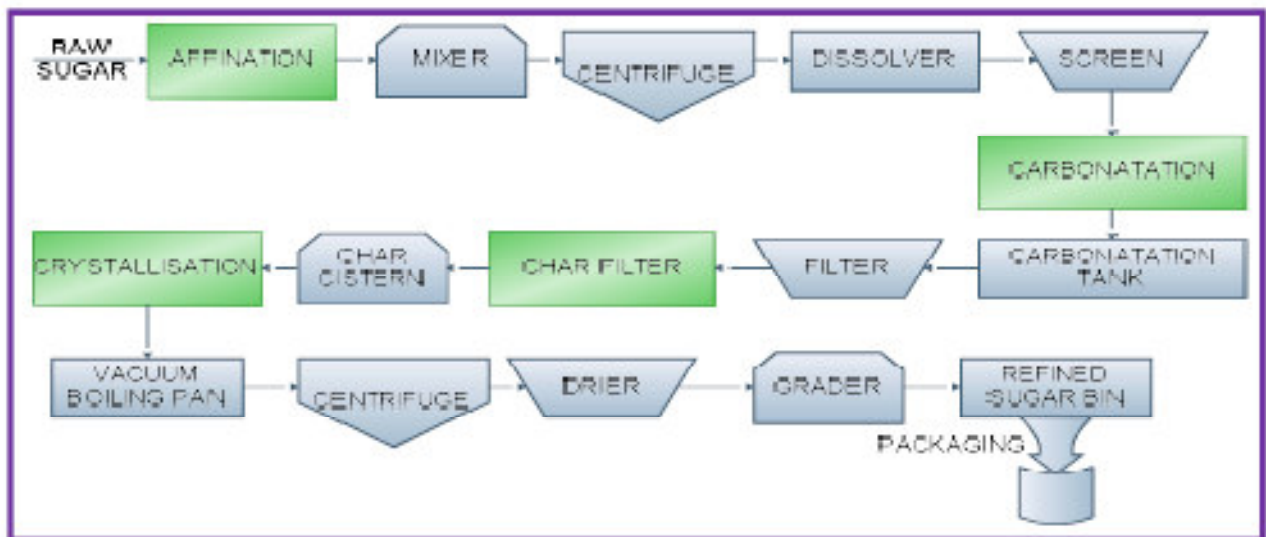
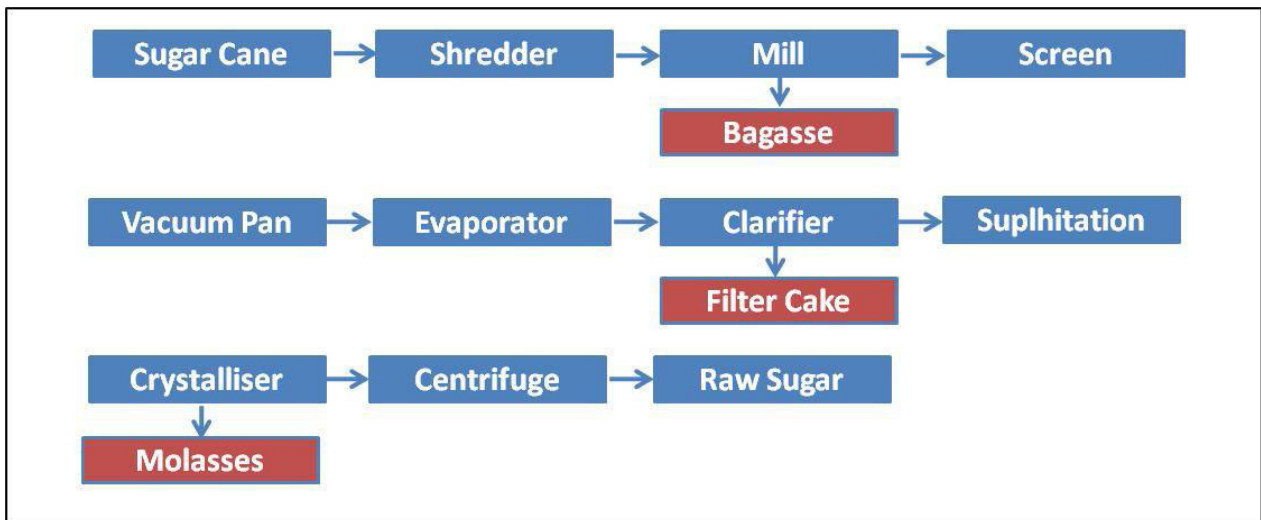


Fig .1: Sugar Manufacturing Process

(2) Cogeneration of Power

When a properly coiled wheel is rotated within magnetic field electricity is generated. To rotate the wheel mechanical, water or steam may be used. Steam generated in a boiler is fed to a turbine coupled to an alternator. Steam is produced in a boiler by burning of bagasse and coal as fuel. Steam at high pressure moves the turbine which rotates alternator and electricity is produced. Part of steam is ejected at low pressure is used for heating requirement of sugar mill, distillery, de-aeration of incoming water and balance is condensed and recycled.

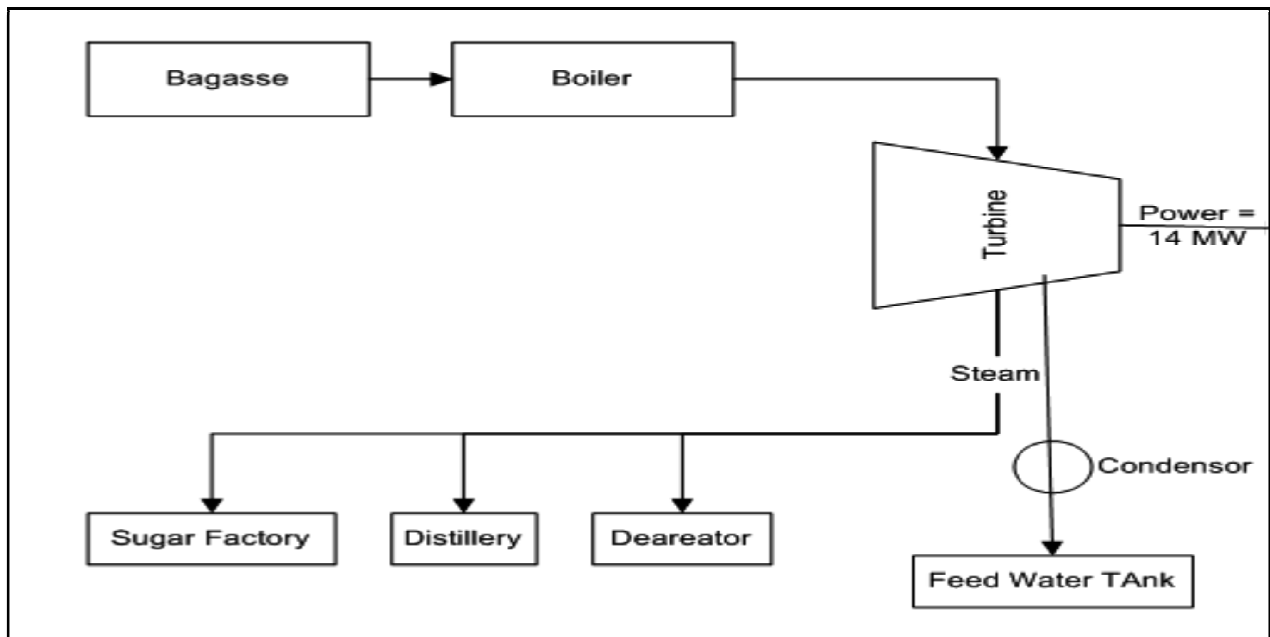


Fig. 2: Cogen Process Flow Diagram

3) Manufacturing process for molasses based distillery

Molasses Handling and Storage: Molasses generated in main sugar plant is stored in molasses storage tanks. From here it is pumped to molasses day tank in fermentation area. From day- tank it is pumped to yeast propagation and fermentation areas through a weighing system.

Yeast Culturing: Yeast culturing system comprises of three yeast propagation vessels of incremental sizes, which are connected in series. Diluted molasses mash is taken in 1st Vessel and yeast cell mass is pitched in it under hygienic conditions. Cell-mass grows and is then transferred to the next higher volume vessel. Yeast propagation vessels are provided with heating, cooling and steam sterilization arrangements. Once yeast has grown to proper healthy cell concentration, contents of last vessel are transferred to the pre-fermenter. Sterile air, necessary for yeast growth, is supplied to yeast propagator and pre-fermenter vessels.

Fermentation: Four fermentation tanks operate in Fed-batch Mode. Fermenters serve as bioreactor vessels in which sugar is converted to ethanol by yeast. Each fermenter is filled with dilute molasses and yeast cell mass from the pre-fermenter. The fermentation process is exothermic; To maintain an optimum temperature of around 32°C in fermenters, heat generated during fermentation process is removed by circulating fermenter contents through external heat exchangers, cooled by cooling water. The gases generated during fermentation process are collected and scrubbed in CO2 scrubber, to recover ethanol being carried over with vent gases. After completion of fermentation process, fermented beer is transferred to the beer-well and fermenter tank is thoroughly cleaned for the next fermentation cycle. Beer-well provides the surge capacity between Fermentation and Distillation Systems.

Clean-in-place System: Efficient CIP System is provided to ensure proper cleaning of process equipment with inter-connecting piping and minimize microbial contamination in the process. The system consists of hot water tank, caustic solution tank, a high-pressure pump, tank cleaning nozzles and associated piping. A good quality sterilant is used during the CIP cycle to disinfect the system, as and when required.

Distillation: Multi-pressure Distillation System comprises of seven distillation columns operating at different internal pressures, so that overhead vapours from the distillation columns operating under higher pressure can be used to heat columns operating under lower pressure. This thermal integration of distillation columns leads to a system where high grade neutral alcohol can be produced with very low energy consumption. The various distillation columns are degasifying column, stripper column, pre-concentrator column, evaporator, extractive distillation column, rectification column and recovery column. The final product is purified dilute alcohol and is of 96% v/v ethanol content

Dehydration: The plant design is centered on three columns filled with molecular sieve beads. One of the columns is in adsorption mode while other two columns are in the different stages of regeneration mode. Feed alcohol is preheated in feed economizer with heat supplied by dry saturated steam. Hydrous ethanol vapors pass down the molecular sieve bed in one of the adsorption columns, where the water is adsorbed into the pores of the molecular sieve and ethanol passes through. Dehydrated ethanol product is condensed back to the liquid phase and cooled to the ambient temperature. One of the molecular sieve columns is always in the adsorption mode while the others are in regeneration mode. In regeneration mode, the adsorbed water is removed from the molecular sieve beads by applying deep vacuum to the molecular sieve column under regeneration. This steam is sent back to the rectification column where the ethanol is concentrated and recycled, while water leaves the system from the base of rectification column.

Evaporator: Spent Wash Concentration System comprises of a triple-effect evaporator unit thermally integrated with the distillation plant. The integrated evaporator will use only waste heat from the distillation plant for the concentration of spent wash. Evaporator system will reduce the spent wash volume by over 40% of feed flow. Concentrated spent wash from the integrated evaporator will be sent to the composting yard, where it will be mixed with the Press Mud from the adjacent sugar mill and composted to produce valuable composted organic manure. This ensures a zero discharge system for spent wash. The process flow chart for 50 KLPD molasses based distillery is given below

Fig. 3

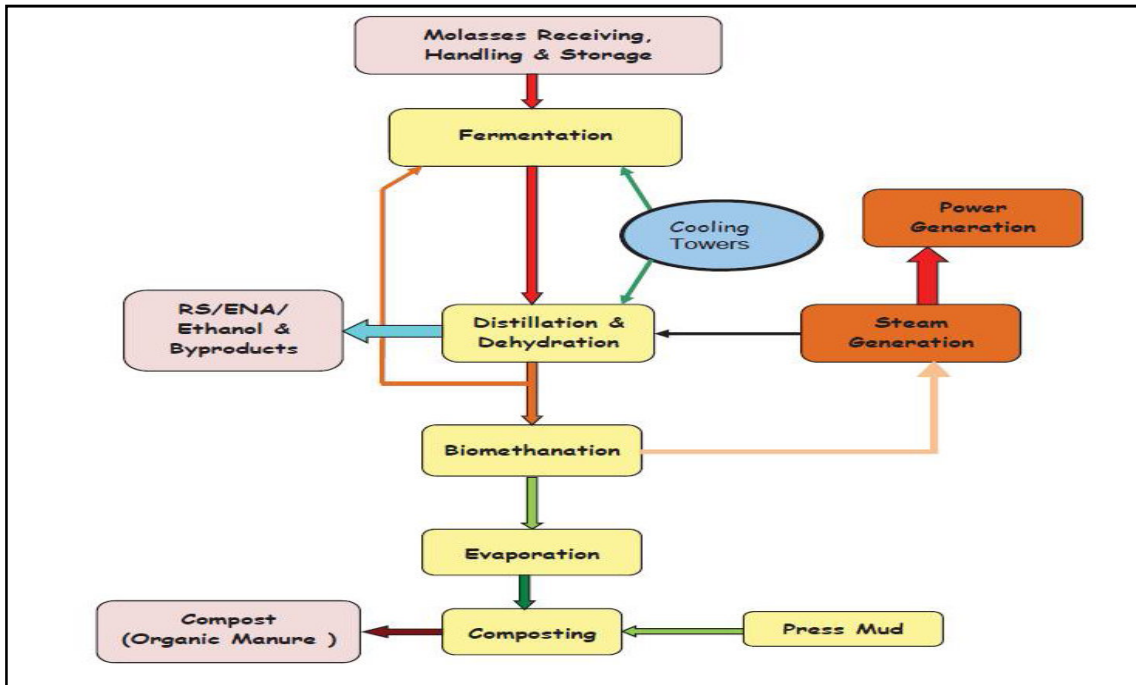


Fig. 3: Molasses Based Operation of Distillery

1.5 Description of the Environment

Land use

The land use is changed to industrial use. The sugar and cogen project will require land for entire basic infrastructure, Plant equipments, storage of Plant inputs and finished products. Besides this Administrative Office, Security arrangements, Fire fighting arrangements etc shall also have to be considered. The existing sugar and cogen plant and proposed distillery is to be located at barren plot in the project site

Meteorology

The wind-rose diagram indicates that the predominant winds are from E and ESE sectors with the dominant wind speed class of 0.5-11.1 m/s and calm condition of 0.00%. Local prevailing wind pattern during the study period was the conformity with the climatologically normal of the region. The data indicate that the average temperature and relative humidity varied in the range of 21.1⁰C to 40.8⁰C and 32% and 80% respectively.

Ambient Air Quality

The minimum and maximum range of PM₁₀ was 41-69 µg/m³, range of PM_{2.5} was 9-32 µg/m³, range of SO₂ was 8-22 µg/m³, NOx was 14-36 µg/m³ and the range of CO concentration was 0.25-0.83 mg/m³.

Ambient Noise Quality

Noise levels in around the project site (industrial zone) were observed between 64.9 dB(A) to 75.4 dB(A) during day time while during night time 55.4 dB(A) to 59.4 dB(A), Noise levels in residential site (villages) were observed between 37.4 dB(A) to 51.9 dB(A) during day time while during night time it was recorded 30.2 dB(A) to 38.4 dB(A).

Surface Water Quality

The results of surface water viz. pH, TSS, TDS and conductivity, during study period of surface water are found in the range of 7.1- 8.6, <10 mg/l, 210 mg/l – 798 mg/l and 360 µMho/cm -1215 µMho/cm respectively. Bacteriological quality: total coliform in surface water was in the range of 48-62 MPN/100ml while Fecal coliform ranged from 4-6 MPN/100ml

Ground Water Quality

The ground water quality viz. pH, TSS, TDS and conductivity are observed in the range of 7.4 - 8.0, <10 mg/l, 218 - 1321 mg/l and 341 - 1899 µMho/cm respectively.

Soil Quality

Soil pH in the study area is observed to be moderately alkaline in reaction ranged from 7.3 - 8.0. The EC of the soil analyzed and the results are in the range of 137 – 215 µMho/cm found to be below average. Bacteriological quality in ground water observed non-detectable limits.

Land-use land cover classification indicates 40.24% highest area covered by scrub/waste land followed by 34.75% agricultural land, 14.82% water bodies, 7.23% dense forest, 1.86% build up area and 0.13% mine/stone quarry.

Ecology and Biodiversity

A total of 153 plant species were recorded out of these 99 trees, 27 shrubs and herbs, 14 species of climbers and 13 species of grasses were recorded in the study area.

The mammals like *Lepus ruficaudatus*, *Felis chaus*, *Herpestes edwardsi*, *Macaca mulatta*, *Presbytis entellus*, *Canis aureus* were recorded under schedule II of Wildlife (Protection) Act, 1972.

Socio-economic

Demographic structure in the study area is: Total population 49,311, out of which 25,520 are male and 23,791 female. SC and ST populations are 14.72% and 0.28% respectively. Literacy rate are Total 64.74%, out of which 57.69% male and 42.31% female. The main workers are: 45.20%, marginal workers 3.23% and 51.56% are non-workers. Sex ratio was recorded 932 number of female per thousand of male in the study area.

1.6 Anticipated Environmental Impact and Mitigation Measures**Construction Phase**

During the construction phase, air pollution will be due to construction activities i.e. leveling of site, movement of vehicles on road and operation of DG set and machineries. Water sprinkling on road will be on continuous intervals. Top soil will be stacked separately and will be used for green belt development. Domestic effluent will be treated in septic tank and disposed in soak pit.

Operation Phase

About 400 KLD spent wash will be generated from the distillery process, that will be treated in bio-digester and MEE will be used for bio-compost.

Air Pollution Control

- Adequate stack height (60 mts.) will be provided for better dispersion of the air pollutants
- ESP will be installed to control the particulate matter emission from sugar/cogen plants
- Ventury scrubber will be installed on distillery boiler
- Ambient air quality and stack emission would be regularly monitored and effective control exercised, so that the stack emission load limits would be met at all the time.
- Green belt will be developed on 33% area of the total project area (20acre) which will help in attenuating the pollutants emitted by the plant.
- Adequate measures for control of fugitive dust emissions will be taken.
- All the roads will be asphalted.

- CO₂ Plant will be installed for collection of CO₂ released during the fermentation process. The CO₂ collected will be sold to various companies as it is food grade quality.

Wastewater Treatment

- Fresh water requirement (487 m³/day for distillery & 277 m³/day for expansion of sugar & co-gen unit) of the project will be taken from Mhaswad dam, Rajewadi .
- The proposed project would be based on “Zero Liquid Discharge (ZLD)”.
- MEE system will be provided
- The sewage generated from the sanitary blocks will be treated in STP and used for irrigation and greenbelt development.
- Rainwater harvesting will be done and the water will be discharge in ground water.
- Wastewater will be treated in ETP of capacity 700 KLPD. Treated water will be used for greenbelt development for sugar and cogen plants.
- A duly lined storage lagoon of 7 days capacity shall be provided

Treatment of Effluent

- Spent less from distillation column and process condensate will be recycled
- Spent wash is sent for anaerobic treatment and thus production of useful biogas (used as fuel in boiler), which will be followed by concentration in multi stage multi effect evaporator
- Wastewater will be treated in ETP. Treated effluent will be will be use for greenbelt development for sugar-cogen plants for distillery ZERO discharge.

Noise Management

- Green belt development (plantation of dense trees across the boundary) will help in reducing noise levels in the plant as a result of attenuation of noise generated due to plant operations and transportation.
- Personal protective equipments like ear plugs and ear muffs will be provided to employees working in the noise prone areas.
- Time to time oiling and servicing and O and M of machineries will be done.

- Acoustic enclosure for Turbine and D.G. sets would be used.

Solid Waste Management

- Spent wash will be concentrated to bio-compost and will be sold to farmers
- Ash from the boiler will be sold to brick manufactures.

Socio-Economic Environment

- M/s SSSSKL will actively contribute to improve the socio-economic conditions of the area and also will actively participate in various socio economic activities like; educational campaigns, health check-ups, training program etc (as per the need) which will lay stress on the overall development of the project site. Following points will be stressed upon:
- During operation the plant will generate employment for local population
- Skilled employees will be recruited through open recruitment process.
- Trained operators and workers in various aspects of EHS (Environment, Health and Safety) will be employed.
- The managers and officers involved in Environment Management Cell would undergo refresher workshop and up-gradation of information on various environmental issues from time to time.
- The industry would help in promoting the activities related to environmental awareness in the nearby villages.

1.7 Analysis of Alternative Site

- For the proposed project adequate land is already available with SSSSKL hence, no alternate site has been proposed for the 50 KLPD capacity molasses based distillery and expansion of sugar and cogen plants.

1.8 Environmental Monitoring Plan (EMP)

The attributes, which require regular monitoring, are specified underneath:

- Air quality
- Water and wastewater quality
- Noise levels

- Soil quality
- Afforestation
- Socio Economic aspects and community development.

1.9 Additional Studies

- Risk assessment studies for both phases i.e. construction and operational phase have been done and plant and personnel will be well protected.
- Public consultations will be done as per the CPCB guidelines
- Public hearing will also be conducted and public comments will be incorporated within the project.

1.10 Manpower Requirements

- The total manpower required for the proposed project is approximately 235 persons which include all categories including unskilled, semiskilled, skilled personnel and contract labor etc.

1.11 Project Benefits

- Proposed project will generate the both types of employment i.e. direct and in direct.
- This industry activity will help in improving the socio-economic benefits like employment, communication, education etc.

1.12 Environmental Cost Benefits

- Total cost of Existing sugar mill and Cogeneration plant is **Rs.111.62 Crores.**
- The estimated project cost of proposed Distillery cum Ethanol plant is **Rs.35 crores.**
- The estimated project cost of Expansion of Sugar Mill and Cogeneration plant is **Rs.80 Crores.**
- Out of which **8.18 Crores** will be allotted as capital cost and **1.42 Crores** will be allotted as annual recurring cost for Environmental Management Budget.

Table 4: EMP Budget

S. No.	Particulars	Capital cost	Annual recurring cost
		(Rupees in lacs)	
1.	ESP+ Coal Handling + Ash Handling	540	55
2.	Multiple Effect Evaporator	200	25
3.	Condensate Polishing Unit (CPU)	46	5
4.	Sewage treatment plant	12	4
5.	Monitoring of pollution parameters	--	7
6.	Laboratory and chemicals	5	4
7.	Safety and healthcare	3	1
8.	Salary of EMP staff	--	36
9.	Development of green belt	12	5
Total		818	142

1.13 Environment Management Plan

- An Environmental management cell will be formulated and all mitigation measures suggested in the report will be implemented.

1.14 Conclusion

The development of proposed 50 KLPD distilleries and expansion of Sugar & Cogen plant of 5000 TCD and 22 MW capacities at Rajewadi area is technically and economically feasible and environmental friendly. The conclusions of the project report may be drawn from the following points:

- Baseline environmental status, anticipated environmental impacts and mitigation measures have been prepared and included in the report to ensure there is no damage to the existing environment.
- To check post project scenario a post project monitoring program is included in environment management plan.
- All the activities of proposed distillery along with expansion of Sugar and Cogen units will be confined to the acquired area of SSSSKL; emissions will be restricted well within allowed limits. Thus, the environment will not be adversely affected in any way.

- Distillery operations from processes will be ZERO discharge projects. Thus there will not be any wastewater discharge in the environment.
- The by-products (Bagasse, Press mud and Molasses) produced from sugar manufacturing process will be used in distillery process for manufacturing of Rectified spirit, Alcohol, Ethanol, Electrical Power, Biogas and Bio-compost etc.
- The development of 5000 plantation as green belt (33% of total area) will help to increase the biodiversity of the area. It will effectively mitigate environmental pollution.
- Rain water harvesting, recycling of water, passive enclosures/dust suppression method for dust generating machines in project areas reduce demand of fresh water.
- The unit will generate power from renewable resources bagasse. It will generate power in excess of its own requirement and feed to state grid.
- Being agro based industry it will offer ready market for local sugar cane growers.
- Apart from selling their produce to factory farmers will get back bio compost from factory to enhance nutrient level of their farms.
- SSSSKL will deliver its obligations under corporate social responsibility (CSR). Under CSR policy it will ensure development of the surrounding villages and the area and Quality of Life of local people will be improved.

Table 5: CSR Budget Plan

S. No.	Activities	Social Benefits	Expenses (Rs. Lacs)
1.	Education Development	<ul style="list-style-type: none"> • Providing scholarships and prize amounts for merit students • Providing reimbursement of cost of uniform, notebooks for factory employee children's. • Providing skill development trainings • Conducting Art of Living classes to the employees and villagers so as to create value in the lives of people. 	15.00
2.	Drip Irrigation	<ul style="list-style-type: none"> • To save water, increase crop production • Minimize use of water 	10.00

3.	Rain water Harvesting	<ul style="list-style-type: none"> Water collection from factory terrace Rain water for reuse, landscape irrigation Greenbelt development 	20.00
4.	Greenbelt	<ul style="list-style-type: none"> Greenery for ecological balance Enrich local biodiversity Control Air and Noise pollution, windbreak Helpful to control soil erosion Plan for plantations 	10.00
5.	Education Development	<ul style="list-style-type: none"> Providing scholarships and prize amounts for merit students Providing reimbursement of cost of notebooks for factory employee children's. Providing skill development trainings 	15.00
6.	Health Program	<ul style="list-style-type: none"> Conducting frequent health Checkups for all the workers regularly. Providing Personnel Protective Equipment (PPE) for all the workers Providing safety training programs for all workers Providing safe drinking water with RO Treatment facility. Providing hygienic toilets to the workers and cane truck drivers. 	15.00
7	Rural Road Development	<ul style="list-style-type: none"> Provide Road infrastructure facilities from the factory connecting to nearby villages. Providing repairs for the damaged roads due to the vehicular movement. 	15.00
7.	Organic Farming: Supply of Bio-Fertilizer. Bio-compost distribution at subsidized rates to the farmers and cane growers		15.0
Total Funds for CSR Activities			115 lakhs

- Preference will be given to local population for employment as well as in awarding works contract to ensure small scale industries are promoted in the area
- SSSSKL will also a helping hand in improvement of infrastructural facilities like education, medical, transport etc.
- In view of such several advantages the management requested public to award their approval for the project.