

**Point wise Compliance towards Conditions in Environment Clearance Granted to 30 KLPD Distillery**

Brief Summary of the Project 1. Name of Project: **M/s. Jakraya Sugar Limited,**

2. Location: District & State/UT: Watwate, Tal. Mohol, Dist.: Solapur, Maharashtra State.

3. Address for Correspondence: Watwate, Tal. Mohol, Dist.: Solapur, Maharashtra State.

4. Capacity of Project: **30 KLPD Molasses based Distillery**

5. Clearance Letter No. & date: **J-11011 / 314 / 2012 – IA-II (I) dated 28.10.2015**

6. Date of Commissioning of Distillery: January 2018

M/s. Jakraya Sugar Limited (JSL) is 30 KLPD Molasses based established in integrated complex of Sugar Factory 4900 TCD & Co-gen Plant of 11 MW. Environmental Clearance (EC) from MoEFCC; New Delhi have been granted to distillery on 28st October 2015. Commissioning of project was done in month of January 2018. Project site is located at a distance of 1.92 km from Watwate Village and 36 Km from Solapur district. Effluent generated from distillery is in the form of spent wash, spent lees etc. Raw spent wash generated from distillery is concentrated in Multiple Effect Evaporators (MEE). Concentrated spent wash is used for bio-composting along with other filler material such as press mud, boiler ash and yeast sludge. Other effluents such as spent lees, evaporation condensate generated is treated in Condensate Polishing Unit (CPU) and used for fermentation dilution and cooling tower makeup. Accordingly, Zero Liquid Discharge (ZLD) is achieved.

Sugar Factory was established in year 2010-11 and co-gen in year 2010-11. Effluents generated from sugar & co-gen is treated in ETP provided on site. Steam required for sugar is taken from boiler of 70 TPH. Bagasse as fuel is used to

A. 'SPECIFIC CONDITIONS' in the Clearance Letter

**Condition No.1**

Environment clearance accorded is for molasses based distillery unit (30 KLPD) only and no grain based distillery unit shall be operated without prior permission from the Ministry.

Compliance: Only molasses is used for the 30 KLPD distillery and no grains used for distillery. Compliance is been strictly followed.

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**Condition No.2**

As proposed utility boiler of existing sugar unit shall be used and no additional boiler shall be installed.

Compliance: A Boiler of 70 TPH is installed in premises. The steam requirement for Sugar and distillery unit is fulfilled through this boiler, no new boiler is installed. Same is provided with wet scrubber as APC equipment followed by stack of 72M height.

**Condition No.3**

In plant, control measures for checking fugitive emissions from all the vulnerable sources shall be provided. Fugitive emissions shall be controlled by providing closed storage, closed handling & conveyance of chemicals/materials, multi cyclone separator and water sprinkling system. Dust suppression system including water sprinkling system shall be provided at loading and unloading are as to control dust emissions. Fugitive emissions in the work zone environment, product, raw materials storage are a etc. shall be regularly monitored and records shall be maintained. The emissions shall conform to the limits prescribed by Maharashtra Pollution Control Board (MPCB).

Compliance: To control the fugitive emissions from all vulnerable sources necessary compliance is done on site. There under, water sprinkling arrangements have been done to curb the dust emissions during movement of vehicles. Also, monitoring of fugitive emissions in work zone area shall be done and records of same shall be maintained on site.

**Condition No.4**

The gaseous emissions from DG set shall be dispersed through adequate stack height as per CPCB guidelines. Acoustic enclosure shall be provided to the DG sets to mitigate the noise pollution.

Compliance: Two D.G. Sets of capacity 625 KVA (2 Nos.) are installed in existing sugar factory & co-gen plant. The same is provided with silencer and stack of about 5 M each height above the rooftop. Also, acoustic enclosure is provided to mitigate the noise pollution as per norms. DG sets are operated only during power failure.

**Condition No.5**

The Company shall upload the status of compliance of the stipulated environmental clearance conditions, including results of monitored data on its website and shall update the same periodically. It shall simultaneously be sent to the Regional Office. Of MOEF, the respective Zonal office of CPCB and the MPCB. The levels of PM10, PM2.5, SO<sub>2</sub>, NO<sub>x</sub>, CO and HC (Methane) in ambient air shall be monitored and displayed at a convenient location near the main gate of the company and at important public places.

Compliance: The compliance towards above condition strictly followed by our industry. Refer Annexure – I for screen shot of website

**Condition No.6**

Pucca approach road to project site shall be constructed prior to commencing construction activity of the main distillery to avoid fugitive emissions.

Compliance: Construction of Pucca approach road to project site is in process. This has avoided generation of the fugitive emission during vehicle movement. Refer Annexure – II for Photographs

**Condition No.7**

Total fresh water requirement from Bhīma River for distillery unit shall not exceed 300 m<sup>3</sup>/day and prior permission shall be obtained from the Competent Authority. Water consumption shall be reduced by adopting 3 R's (reduce, reuse and recycle) concept in the process.

Compliance: The water requirement for 30 KLPD distillery unit is 175 m<sup>3</sup>/day. Company has already procured permission from concerned Irrigation department. Water permission attached at Annexure III for details Condition No.8 Spent wash generation from molasses based distillery shall not exceed 8kl/kl of alcohol. The spent wash from molasses based distillery shall be treated in bio-methanation process and evaporated in MEE and Concentrated spent wash will be mixed with press mud generated from sugar unit for manufacturing organic manure to achieve 'Zero' discharge. Evaporator Condensate shall be treated and recycled /reused in process. No effluent shall be discharged outside the premises and Zero' discharge shall be maintained.

Compliance: The spent wash generated from 30 KLPD distillery is to the tune of 240 m<sup>3</sup>/d(8 KL/KL) . During operation it is forwarded to bio-methanation plant (capacity 500m<sup>3</sup>/d) followed by concentration in MEE (cap. 500m<sup>3</sup>/d) so as to eventually get concentrated spent wash. Concentrated spent wash is used for bio-composting along with other filler material such as press mud, boiler ash and yeast sludge. Other effluents such as spent lees, evaporation condensate generated is treated in Condensate Polishing Unit (CPU) and used for fermentation dilution and cooling tower makeup. Accordingly, Zero Liquid Discharge (ZLD) was achieved. Refer Annexure - IV for photographs of compost yard.

#### **Condition No.9**

Automatic/online monitoring system (24x7 monitoring devices) for flow measurement and relevant pollutants in the treatment system to be installed. The data to be made available to the respective SPCB and in the Company's website.

Compliance: Online monitoring system for ETP treated water is installed for measuring flow and pollutants like pH, COD, BOD, TSS etc. Also, online system is installed for Stack emission for measuring flow and pollutants like SPM, SO<sub>2</sub>. Photographs of same is attached to Annexure-XIII wrt online system

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#### **Condition No.10**

Spent wash shall be stored in impervious pucca lagoons (RCC) with proper lining with HDPE and shall be kept in proper condition to prevent groundwater pollution. The storage of spent wash shall not exceed 5 days capacity.

Compliance: A 30 days storage capacity tank for raw spent wash is provided on site and 5 days for storage of bio- methanated spent wash is provided on site. The same has been designed as per CPCB's technical guidelines. HDPE liners of 250 mm followed by cement concrete lining have been done. The area of compost yard is 1950 sq.m. Refer Annexure - IV Photographs of RCC Lagoons and compost yard.

#### **Condition No.11**

Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.

Compliance: No process effluent in form of spent wash is allowed to mix with storm water. Separate drains have been provided on site for collection of storm water. Also, spent wash is

carried to treatment facility through closed HDPE pipelines. Hence, mixing of spentwash with storm water does not occur. Refer Annexure-V Photographs of drains.

**Condition No.12**

Adequate numbers of groundwater quality monitoring stations by providing piezometers around the project area and compost yard shall be set up. Sampling and trend analysis monitoring must be made on monthly a basis and report submitted to SPCB and this Ministry. The ground water quality monitoring for pH, BOD, COD, Chloride, Sulphate and total dissolved solids shall be monitored. Sampling and trend analysis monitoring must be made on monthly basis and report submitted to the Ministry's Regional Office at Bhopal and MPCB.

Compliance: Installation of 2 nos. Piezometer is done on site. The same is installed near biocompost yard and ETP. Company does not extract water from ground for Sugar,Co-Gen & Distillery unit or any other purpose. Photographs of Piezometer and compost yard, NOC from CGWA are attached in Annexure VI.

**Condition No.13**

Bagasse / biomass storage in the existing sugar unit shall be done in such a way that it does not get air borne or fly around due to wind.

Compliance: Adequate measures have been taken around bagasse storage for prevention of air pollution. Therein, green belt is provided for prevention of air pollution.

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**Condition 14**

Boiler ash in the sugar unit shall be stored separately as per CPCB guidelines so that it shall not adversely affect the air quality becoming air borne by wind or water regime during rainy season by flowing along with the storm water. Direct exposure of workers to-fly ash & dust shall be avoided. Bagasse ash and coal ash shall be stored separately.

Compliance: A care is taken to avoid mixing of ash in to air or water. 6% ash from total ash generated is utilized in spent wash bio-composting. Remaining ash is sold to brick manufacturer.

**Condition No.15**

Firefighting system shall be as per the norms and cover all areas where alcohol is produced, handled and stored. Provision of foam system for firefighting shall be made to control fire from the alcohol storage tank. DMP shall be implemented

Compliance: Fire hydrant system at manufacturing process and other necessary areas as well as foam system near alcohol storage tanks has been provided. Refer Annexure-VII for photographs of Fire hydrant equipments.

**Condition No.16**

Occupational health surveillance Programme shall be undertaken as regular exercise for all the employees. The first aid facilities in the occupational health center shall be strengthened and the regular medical test records of each employee shall be maintained separately

Compliance: Health checkups are regularly carried out every year for all workers. Hence latest health checkup was carried out in the year 17.01.2019. Moreover, health awareness camps are regularly organized to educate workers and staff members about the Health Hazards and control measures. A sample copy of health check-up report is attached at Annexure - VIII.

**Condition No.17**

Dedicated parking facility for loading and unloading of materials shall be provided in the factory premises. Unit shall develop and implement good traffic management system for their incoming and outgoing vehicles to avoid congestion on the public road'

Compliance: Separate parking area of 20 acres has provided for loading and unloading of material. Refer Annexure - IX photographs of parking.

**Condition No.18**

As proposed, green belt over 29271.3 m<sup>2</sup> shall be developed within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.

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Compliance: Existing green belt developed on site is 73,281 Sq. M. which is 32 % of total plot area. There under, 4650 no's of trees have been planted. Moreover, under proposed expansion of sugar factory, co-gen & distillery plant, an area of about 1020 Sq. M. (1% of total plot area) will be developed under green belt. Details wrt list of trees planted and their number are enclosed at Annexure - X

**Condition No.19**

All the commitments made during the Public Hearing / Public Consultation meeting held on 24th February, 2014 shall be satisfactorily implemented and adequate budget provision shall be made accordingly.

Compliance: No specific commitments were made during Public Hearing. Refer copy of minutes of public hearing enclosed at Annexure - XI

**Condition No.20**

At least 5% of the total cost of the project shall be earmarked towards the Enterprise Social Commitment (ESC) based on local needs and action plan with financial and physical breakup / details shall be prepared and submitted to the Ministry's Regional Office at Bhopal. Implementation of such program shall be ensured accordingly in a time bound manner.

Compliance: CSR activities are being undertaken by JSL. There under, an amount of Rs.5.25 Lakh have been spent for activities like provision for Bandhara repairing , Land development, Donation for gram festival , etc. .The details on CSR activity is attached at Annexure - XII

**Condition No.21**

Provision shall be made for the housing for the construction labor within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile sewage

treatment plant, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structure to be removed after the completion of the project. All the construction wastes shall be managed so that there is no impact on the surrounding environment.

Compliance: Compliance to condition was done.

B. 'GENERAL CONDITIONS' in the Clearance Letter Condition No.1 The project authorities must strictly adhere to the stipulations made by the Maharashtra Pollution Control Board (MPCB), State Government and any other statutory authority.

Compliance: Industry is strictly following the stipulations made by the Maharashtra Pollution Control Board (MPCB), State Government and any other statutory authority.

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#### **Condition No. 2**

No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment and Forests. In case of deviations or alterations in the project proposal from those submitted to this Ministry for clearance, a fresh reference shall be made to the Ministry to assess the adequacy of conditions imposed and to add additional environment protection measures required, if any.

Compliance: No expansion or modifications in the plant is carried out without prior approval of the Ministry of Environment and Forests.

#### **Condition No.3**

The locations of ambient air quality monitoring stations shall be decided in consultation with the MPCB and it shall be ensured that at least one station is installed in the upwind and downwind direction as well as where maximum ground level concentration are anticipated.

Compliance: Ambient air quality monitoring stations are decided in consultation with the MPCB. Refer Annexure XIII

#### **Condition No.4**

The overall noise levels in and around the plant area shall be kept well within the standards (85 dBA) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under Environment (Protection) Act, 1986 viz. 75 dBA (day time) and 70 dBA (night time).

Compliance: The noise levels in the industry premises are within the prescribed limits. The ambient noise levels shall conform to the standards prescribed under Environment (Protection) Act, 1986 viz. 75 dBA (day time) and 70 dBA (night time).

#### **Condition No.5**

The Company shall harvest rainwater from the roof-tops of the buildings and storm water drains to recharge the groundwater and use the same water for the process activities of the project to conserve fresh water.

Compliance: The planning and implementation of Rain water harvesting is under process.

**Condition No.6**

During transfer of materials spillages shall be avoided and garland drains be constructed to avoid mixing of accidental spillages with domestic wastewater and storm water drains.

Compliance: Care is taken while handling and transfer of material to avoid spillages. All steps will be taken to avoid mixing accidental spillages with domestic wastewater and storm water drains.

**Condition No.7**

Usage of Personnel Protection Equipments by all employees / workers shall be ensured

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Compliance: PPEs namely helmets, shoes, gloves, earplugs, goggles, body harness, mask etc. are being provided for workers working in the industry.

**Condition No.8**

Training shall be imparted to all employees on safety and health aspects of chemicals handling. Reemployment and routine periodical medical examinations for all employees shall be undertaken on regular basis. Training to all employees on handling of chemicals shall be imparted.

Compliance: Periodic training on safety, health aspects and handling of chemicals are being taken. Further the protocol pre-employment and periodic health check-up of workers is routinely followed. Refer Annexure-VIII for sample health check-up report.

**Condition No.9**

The company shall also comply with all the environment protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendation made in the EIA/ EMP in respect of environmental management, risk mitigation measures and public hearing relating to the project shall be implemented.

Compliance: The Company is complying with all the environmental protection measures and safeguards and implement all the recommendations made in EIA/EMP. Details are given in table below

Sr. No.

Description Cost Component (In Crores) Capital Annual O & M 1 Air Pollution Control (APC) equipment – Wet scrubber for Existing 70 TPH ,Co-Gen Boiler, ESP for 90 TPH Boiler in distillery with overall 2 stacks (72 M) & Stack (75 M) Online system Rs. 8.5 Rs. 1.7 2 Spentwash Treatment Facility – Spentwash Storage tanks, MEE, CPUs, Existing Sugar Factory ETP Up-gradation, Online system Rs.15.0 Rs. 3.0 3 Noise Pollution Control Rs. 2.0 Rs. 0.25

4 Environmental Monitoring & management Rs. 1.5 Rs. 0.35

5 Occupational Health & Safety Rs .0.35 Rs. 0.1

6 Green Belt Development & Rain Water Harvesting Rs. 1.5 Rs. 0.25

7 Provision towards CSR in Five Years after grant of EC Rs .2.5 Rs. 0.2 Total Rs. 31.35 Rs. 5.85

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**Condition No.10**

The Company shall undertake CSR activities and all relevant measures for improving the social economic conditions of the surrounding area.

Compliance: Please refer compliance under condition no.20 above.

**Condition No.11**

The Company shall undertake eco-developmental measures including community welfare measures in the project area for the overall improvement of the environment.

Compliance: Industry has undertaken from time to time eco-development programmes like tree plantation, awareness programmes for local farmers, donations for gram festival ,chief mentor funds, land development, road repairing expenses etc. in nearby areas.

**Condition No.12**

A separate Environmental Management Cell equipped with full-fledged laboratory facilities shall be set up to carry out the environmental management and monitoring functions.

Compliance: Environment management cell

Condition No. 13 The company shall earmark sufficient funds towards capital cost and recurring cost per annum to implement the conditions stipulated by the Ministry of Environment and Forest as well as State Government along with the implementation schedule for all the conditions stipulated herein. The funds so earmarked for environment management / pollution control measures shall not be diverted for any other purpose.

Compliance: Please refer compliance under condition no.9 above.

Sr. No Description Number of Working Person

1 Managing Director – JadhavS.B

2 General Manager- Kotkar K.C

3 Chief Chemist -Kumbhar N.M

5 Lab In charge -Pawar

6 Fire & Safety In charge- Jadhav V.S

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**Condition No.14**

A copy of the clearance letter shall be sent by the project proponent to concerned Panchayat, Zila Parishad/ Municipal Corporation, Urban Local Body and the local NGO, if any, from whom suggestions/ representation, if any, were received while processing the proposal.

Compliance: Copy of Clearance letter is submitted to concern Panchayat. Refer Acknowledgement copy in Annexure - XIV

#### **Condition No.15**

The project proponent shall also submit six monthly reports on the status of compliance of the stipulated Environmental Clearance conditions including results of monitored data (both in hard copy as well as by e-mail) to the respective Zonal Office of CPCB and concerned SPCB. A copy of Environmental Clearance and six monthly compliance status reports shall be posted on the website of the company.

Compliance: Six monthly compliance reports are now being submitted for period for October 18 to March 2019. Henceforth, regular six monthly reports shall be submitted.

#### **Condition No.16**

The environmental statement for each financial year ending 31st March in the Form - V as is Mandated shall be submitted to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental clearance conditions and shall also be sent to the respective Regional Offices of MoEF by e-mail.

Compliance: The environmental statement for each financial year ending 31st March in Form-V is being submitted to State Pollution Control Board as prescribed under the Environment (Protection) Rules 1986, and amended subsequently. Online application of same are attached at Annexure - XV Condition No.17 The project proponent shall inform the public that the project has been accorded environment clearance by the Ministry and copies of the clearance letter are available with the SPCB / Committee and may also be seen at website of the Ministry at <http://moef.nic.in>. This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same shall be forwarded to the concerned Regional Office of the Ministry.

Compliance: The advertisement of grant of EC is submitted in Sanchar newspaper dated 17.03.2019. Refer Annexure VI for details.

#### **Condition No.18**

The project authorities shall inform the regional office as well as Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of start of the project

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Compliance: The date of financial closure in connection with the Industrial Project is 3

# **Annexure – II**

## **Pucca Approach Road**

कारखाना/आसवनी रस्ता परिसर





# **Annexure – IV**

## **RCC Lagoons**

# Impervious Pucca Lagoon for Spent Wash Storage



# **Annexure – V**

## **Photographs of drains.**

# Storm Water Drain Facility



# **Annexure – VI**

**Piezometer and compost yard, NOC from  
CGWA**

# Piezometer Arrangement for Well Near Compost Yard



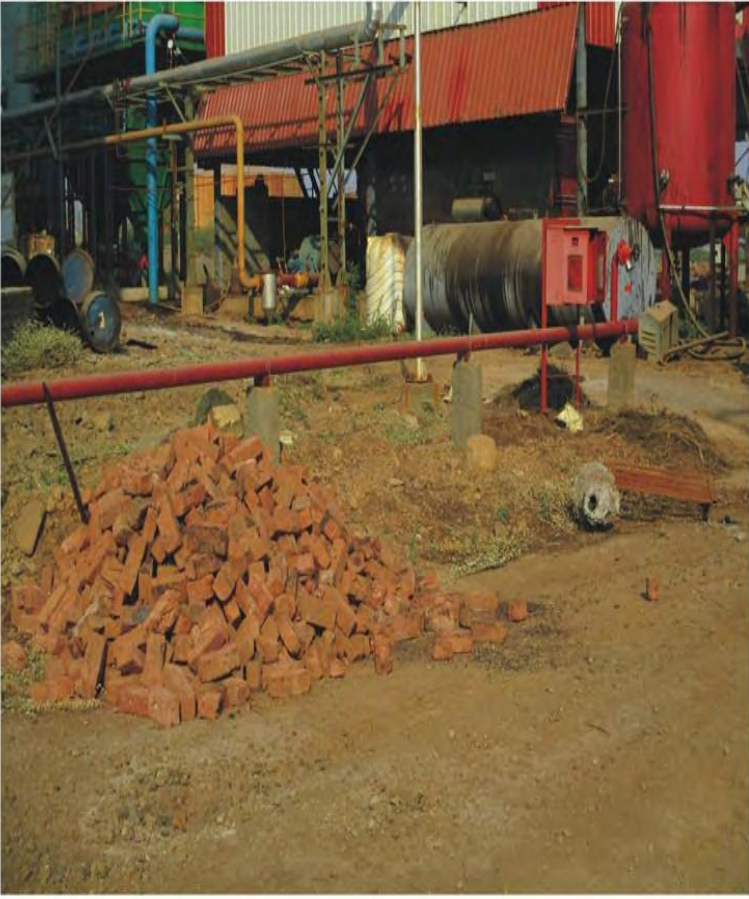
# Compost Yard



# **Annexure – VII**

**Fire hydrant equipments.**

# Safety Arrangement at JSL



# **Annexure – VIII**

## **Health check-up report**

















# **Annexure – IX**

## **Parking**

# Dedicated Parking Facility



# **Annexure – X**

## **Green Belt**

# Green Belt Development at JSL



# Green Belt Development at JSL

