

**Query Reply w.r.t Grain Based Distillery Plant (120 KLPD) along with Power Generation of 4.0 MW at Village-Jatwar, Block-Shahzadpur, Tehsil-Naraingarh, Distt.-Ambala, Haryana**

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**EDS REPLIES**

**1. Accreditation certificate of environmental consultants is expiring on 09.08.2021; kindly submit renewal & valid certificate.**

**Reply:** Extension letter for the validity period from NABET is attached as **Annexure-I**.

**2. EMP doesn't even include basic details such as intro, project description, process description water balance, Env findings in the study area, Plant layout, Proposed Green belt plan layout. Further, new boiler is being proposed. Kindly conduct air quality modeling for the same and include it in the EMP. Re-submit the revised EMP.**

**Reply:** EMP with required details has been attached as **Annexure-II**.

**3. Submit translated version of land documents, land use conversion documents and an undertaking stating khasra no. under company's possession along with land use conversion certificate.**

**Reply:** Translated version of land documents is attached as **Annexure-III**. Total plant area i.e. 5.70 ha has already been acquired by the company and proposed project site falls under the No CLU zone as per the HARYANA ENTERPRISES AND EMPLOYMENT POLICY, 2020(Page No. 83- Annexure-6) issued by Department of Industries and Commerce, Government of Haryana , hence no diversion of land is required for the project. Copy of the same enclosed as **Annexure-IV**.



# National Accreditation Board for Education and Training

(Member - International Accreditation Forum & Pacific Accreditation Cooperation)



August 03, 2021

QCI/NABET/EIA/ACO/21/1908

**Grass Roots Research & Creation India (P) Ltd.,**

F: 374 & 375, Sec-63, Noida-201301

Uttar Pradesh

Sub.: Extension of Validity of Accreditation till Nov 02, 2021– regarding  
Ref.. Certificate no NABET/EIA/1821/SA 0110

Dear Sir/Madam

In view of the outbreak of Corona Virus (COVID-19) and subsequent lockdown declared for its control vide order dated 24th March 2020, issued by Ministry of Home Affairs, Govt. of India, NABET hereby extends the Validity of your Accreditation till Nov 02, 2021.

Meanwhile, you may enclose this with your EIA reports along with the certificate/validity letter. The EAC/SEIAA/SEAC/Other are hereby requested to consider the same as a valid document for the preparation of EIA/EMP report.

With best regards.

(A K Jha)  
Sr. Director, NABET



# Quality Council of India

National Accreditation Board for  
Education & Training



## Certificate of Accreditation

### Grass Roots Research & Creation India (P) Ltd.

F: 374 & 375, Sec-63, Noida-201301, Uttar Pradesh

**Accredited as Category - A** organization under the QCI-NABET Scheme for Accreditation of EIA Consultant Organizations: Version 3 for preparing EIA-EMP reports in the following Sectors:

| Sl.No | Sector Description  | Sector (as per) |           | Cat. |
|-------|---|-----------------|-----------|------|
|       |   | NABET           | MoEFCC    |      |
| 1     | Mining of minerals including opencast / underground mining  | 1               | 1 (a) (i) | A    |
| 2     | Offshore and onshore oil and gas exploration, development & production  | 2               | 1 (b)     | A    |
| 3     | River Valley projects   | 3               | 1 (c)     | A    |
| 4     | Thermal power plants  | 4               | 1 (d)     | A    |
| 5     | Coal washeries  | 6               | 2 (a)     | A    |
| 6     | Mineral beneficiation   | 7               | 2 (b)     | A    |
| 7     | Metallurgical industries (ferrous & non-ferrous)  | 8               | 3 (a)     | A    |
| 8     | Cement plants   | 9               | 3 (b)     | A    |
| 9     | Synthetic organic chemicals industry  | 21              | 5 (f)     | A    |
| 10    | Pulp & paper industry   | 24              | 5 (i)     | A    |
| 11    | Oil & gas transportation pipeline   | 27              | 6 (a)     | A    |
| 12    | Industrial estates/ parks/ complexes/areas, export processing Zones (EPZs), Special Economic Zones (SEZs), Biotech Parks, Leather Complexes | 31              | 7 (c)     | A    |
| 13    | Ports, harbours, break waters and dredging  | 33              | 7 (e)     | A    |
| 14    | Highways  | 34              | 7 (f)     | A    |
| 15    | Common Effluent Treatment Plants (CETPs)  | 36              | 7 (h)     | B    |
| 16    | Common Municipal Solid Waste Management Facility (CMSWMF)   | 37              | 7 (i)     | B    |
| 17    | Building and construction projects  | 38              | 8 (a)     | B    |
| 18    | Townships and Area development projects   | 39              | 8 (b)     | B    |

**Note:** Names of approved EIA Coordinators and Functional Area Experts are mentioned in SA AC minutes dated April 18, 2020 posted on QCI-NABET website.

The Accreditation shall remain in force subject to continued compliance to the terms and conditions mentioned in QCI-NABET's letter of accreditation bearing no. QCI/NABET/ENV/ACO/20/1375 dated Jul. 09, 2020. The accreditation needs to be renewed before the expiry date by Grass Roots Research & Creation India (P) Ltd., Noida following due process of assessment.

Sr. Director, NABET  
Dated: Jul. 09, 2020

Certificate No.  
NABET/EIA/1821/ SA 0110

Valid up to  
14.02.2021

For the updated List of Accredited EIA Consultant Organizations with approved Sectors please refer to QCI-NABET website.



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Remarks: Conditions apply

|    |  |   |           |
|----|--|---|-----------|
| 1  | Mining of minerals including open cast/<br>underground mining  | A | 1 (a) (i) |
| 2  | Offshore and onshore oil and gas<br>exploration, development & production  | A | 1 (b)     |
| 3  | River Valley projects  | A | 1 (c)     |
| 4  | Thermal power plants   | A | 1 (d)     |
| 6  | Coal washeries   | A | 2 (a)     |
| 7  | Mineral beneficiation including<br>pelletisation   | A | 2 (b)     |
| 8  | Metallurgical industries (ferrous and non-<br>ferrous) - both primary & secondary  | A | 3 (a)     |
| 9  | Cement plants  | A | 3 (b)     |
| 21 | Synthetic organic chemicals industry<br>(dyes & dye intermediates; bulk drugs and<br>intermediates excluding drug formulations;<br>synthetic rubbers; basic organic<br>chemicals, other synthetic organic<br>chemicals and chemical intermediates) | A | 5 (f)     |
| 22 | Distilleries   | A | 5 (g)     |
| 24 | Pulp & paper industry excluding<br>manufacturing of paper from wastepaper<br>and manufacture of paper from ready pulp<br>without bleaching   | A | 5 (i)     |
| 27 | Oil & gas transportation pipeline (crude<br>and refinery) petrochemical products,<br>passing through national parks/<br>sanctuaries/coral reefs /ecologically<br>sensitive Areas including LNG terminal  | A | 6 (a)     |
| 31 | Industrial estates/ parks/ complexes/<br>Areas, export processing zones (EPZs),<br>Special economic zones (SEZs), Biotech<br>parks, Leather complexes  | A | 7 (c)     |
| 32 | Ports, harbours, breakwaters, etc.   | A | 7 (d)     |



Certificate of Accreditation

**Certificate No.:**

NABET/EIA/1821/ SA 0110

**Validity:**

**Validity Extension Letter No.:**

QC/NABET/EIA/AGO/21/1728

**Validity:** 09-08-2021

**UserName:** ORG000550

**Accreditation Date:** 12/3/2010

12:00:00 AM

Human Resource

**Environmental Management Plan Report w.r.t Grain Based Distillery Plant (120 KLPD) along with Power Generation of 4.0 MW at Village-Jatwar, Block-Shahzadpur, Tehsil-Naraingarh, Distt.-Ambala, Haryana**

**ENVIRONMENTAL MANAGEMENT PLAN**

**1.0 PROJECT DESCRIPTION**

**M/s JVS Biofuel Pvt. Ltd.**, the project proponent, proposes to install a green field project of grain based distillery to produce ethanol for blending with petroleum. Since the location of proposed project site in agriculturally prominent area of Haryana and Punjab, proponent intends to use grain as raw material. To meet the power required for the proposed project, proponent wish to install own power plant also. For power generation, fuel proposed is rice husk or bagasse. The project site is located at village -Jatwar, Tehsil- Shahzadpur, Dist-Ambala, State - Haryana.

**Table: - 1.1 Plant Configuration**

| SL.No | Facility                           | Capacity |
|-------|------------------------------------|----------|
| 1     | Grain Base Distillery              | 120 KLPD |
| 2     | Co-Generation Power Plant (30 TPH) | 4.0 MW   |

**Table 1.2 Salient Features of the Project**

|    |   |  |
|----|---|--|
| 1  | Name of the Company                       | <b>M/s JVS Biofuel Pvt Ltd</b>   |
| 2  | Registered Office<br>Plant & Admin Office | <b>Plant Location:</b><br>Village-Jatwar, Block-Shahzadpur, Tehsil-Naraingarh, Distt.-Ambala, Haryana<br><br><b>Corporate Office:</b><br>H.NO. 210P, Sector-8, Panchkula Haryana- 134109 |
| 3  | Name of the Directors                     | Shri Jitendra Kumar Jindal<br>Shri Vinod Kumar Jindal<br>Shri Sunil Kumar Singla   |
| 4  | Proposed Sector                           | Schedule: 5 (ga), Grain Based Distilleries Producing Ethanol, Cat-B2   |
| 5  | Area of plant                             | 5.70 Ha  |
| 6  | Topo Sheet No                             | H43K15 (Project Site)  |
| 7  | No. of Shifts                             | 3 Shifts of 8 Hours and 330 Days   |
| 8  | Installed Capacity                        | Grain Base Distillery of 120 KLPD with Captive Power Plant of 4 MW.  |
| 10 | Final Product & By-Product                | Ethanol (120 KLPD)<br>DDGS- 85 TPD   |

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|    |                         |  |
|----|-------------------------|--|
|    |                         | CO <sub>2</sub> - 66 TPD   |
| 11 | Cost of Project         | INR 100 Cr   |
| 12 | Total Manpower          | 120 Persons  |
| 13 | Total Power Requirement | 3.8 MW (Source-In house CPP)   |
| 14 | Total Water Requirement | Total Water Requirement = 3563 KLD<br>Fresh water requirement= 652 KLD               |
| 15 | Major Raw Material      | Damaged Grain Feed Stock, Broken Rice, Maize, Bajra & Sorghum, Starchy Materials etc |

## **1.1 INTRODUCTION**

Environmental Management Plan consists of the set of mitigation, management, monitoring and institutional measures to be taken during implementation and operation of a plant to eliminate adverse environmental impacts or reduce them to acceptable levels. The present environmental management plan addresses the components of environment affected during the different activities forming part of the processes of existing plant.

Based on the evaluation of impacts and baseline conditions, an Environmental Management Plan (EMP) has been delineated to mitigate the adverse impacts on environment of the area due to the proposed project. The EMP is herein outlined after taking into account the various Acts, Rules and Regulations/ Standards concerned with the environmental management.

### **Aims of EMP**

- Overall conservation of the environment.
- Minimization of waste generation and pollution.
- Judicious use of natural resources and water.
- Safety, welfare and good health of the work force.
- Ensure effective monitoring of all control measures.
- Vigilance against probable disasters and accidents.
- Monitoring of cumulative and long-time impacts.

## **Environmental Management Plan Report w.r.t Grain Based Distillery Plant (120 KLPD) along with Power Generation of 4.0 MW at Village-Jatwar, Block-Shahzadpur, Tehsil-Naraingarh, Distt.-Ambala, Haryana**

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### **1.2 ENVIRONMENT POLICY**

M/s JVS Biofuel Private Limited has a well-defined policy to keep the Environment clean and green. The company has decided that all effective steps shall be taken to ensure that flow of information from working level to top level should flow in a smooth and coordinated manner, so that in case any deficiency is noted, it is brought to the notice of top management and preventive and corrective action is initiated in a systematic manner

**Resolution:** M/s JVS Biofuel Private Limited, on 27.01.2021, at the plant w.r.t Grain Based Distillery Plant (120 KLPD) along with Power Generation of 4.0 MW at Village-Jatwar, Block-Shahzadpur, Tehsil-Naraingarh, Distt.-Ambala, Haryana with the following objectives.

M/s JVS Biofuel Private Limited is committed to:-

- ❖ Follow the National laws and regulations related to Environment Protection and Prevention & Control of Pollution.
- ❖ Design, construct and operate the plant by adopting technology and process that are sustainable and environmentally acceptable in the country.
- ❖ Adoption of State of the Art technology for prevention and control of impacts.
- ❖ Take steps to prevent, minimize and control releases to air, water and land of substances which could adversely affect human health and the environment.
- ❖ Operate facilities and conduct activities taking into consideration the efficient use of natural resources.
- ❖ Provide and maintain healthy and safe working condition for all employees.
- ❖ Ensure the protection of the health and safety of workers.
- ❖ Adopt measures to ensure that all its contractors and business associates also comply with National laws and regulations related to Environment & Control of Pollution.
- ❖ Focus on continual improvement of environmental performance and ensure involvement of employees at all levels by providing training & awareness.

#### **For effective and efficient implementation of Environment Policy, Company shall:-**

- ❖ Ensure the allocation of sufficient financial, human and technological resources along with organizational infrastructure for its implementation.
- ❖ Prepare and maintain site specific, list of all the applicable regulations legal records, compliance requirements and compliance status.
- ❖ Develop and implement innovative processes focused on reducing consumption of energy and water and minimizing quantity of waste dispose.
- ❖ Review facilities and programs on a regular basis and establish monitorable targets, quantified as appropriate for continual improvement of our environmental performance.



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- ❖ As far as practicable, purchase products and services that will have minimum impact on the environment.
- ❖ Communicate the environmental commitment and performance of the organization to the stakeholders.
- ❖ Establish an organizational structure to oversee the effective implementation of corporate environment policy. Define key responsibilities with the various levels of organization for policy implementation.



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Fig No. 1: Environment Policy

## 1.2.1 Interaction with the State Pollution Control Board

EMC shall be in regular touch with SPCB and shall send them environmental monitoring reports regularly in the prescribed format, as per the prevailing practice. Any new regulations considered by State/Central Pollution Control Board for the Industry shall be taken care of by EMC

## **Environmental Management Plan Report w.r.t Grain Based Distillery Plant (120 KLPD) along with Power Generation of 4.0 MW at Village-Jatwar, Block-Shahzadpur, Tehsil-Naraingarh, Distt.-Ambala, Haryana**

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### **1.2.2 Provide Training**

EMC would be responsible for the implementation of the EMP, needs to be trained on the effective implementation of the environmental issues. To ensure the success of the implementation set up proposed, there is a high requirement of training and skill up-gradation. For the proposed project, additional training facilities will be developed for environmental control. For proper implementation of the EMP, the officials responsible for EMP implementation will be trained accordingly.

To achieve the overall objective of pollution control it is essential not only to provide latest pollution control and monitoring systems but also to provide trained manpower resources to operate and maintain the same. Therefore, apart from the EMC, specific training will be provided to personnel handling the operation and maintenance of different pollution control equipment.

In-plant training facilities will be developed for environmental control. The training will be given to employees to cover the following fields:

- Awareness of pollution control and environmental protection to all.
- Operation and maintenance of specialized pollution control equipment.
- Organize field monitoring, maintenance and calibration of pollution monitoring instruments.
- Laboratory testing of pollutants.
- Repair of pollution monitoring instruments.
- Occupational health/safety.
- Disaster management.
- Environmental management.
- Afforestation / plantation and post care of plants.
- Knowledge of norms, regulations and procedures.
- Risk assessment and Disaster Management.

### **1.2.3 Other Responsibilities of the Cell Will Include**

MOEFCC approved lab will be retained to generate the environment quality data in respect of air, water, noise, soil and meteorology and prepare the Environmental Report.

- Timely renewal of Consents & Authorization will be taken care of.
- Submitting environmental monitoring report to SPCB. The cell will also take mitigative or corrective measures as required or suggested by the Board.
- Conduct and submit annual Environmental Statement to SPCB.
- Prepare and submit six monthly report on the compliance with the conditions of the environmental clearance

## **Environmental Management Plan Report w.r.t Grain Based Distillery Plant (120 KLPD) along with Power Generation of 4.0 MW at Village-Jatwar, Block-Shahzadpur, Tehsil-Naraingarh, Distt.-Ambala, Haryana**

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- Keeping the management updated on regular basis about the findings / results of monitoring activities and proposes measures to improve environmental performance.
- Conducting regular safety drills and training programs to educate employees on safety practices. A qualified and experienced safety officer will be responsible for the issues related to occupational safety and health.
- Conducting safety and health audits to ensure that recommended safety and health measures are followed.

### **1.2.4 SOP for Flow of Information**

The Environmental Management Group would consist of executives and supporting staff headed by senior official reporting to CEO. During the construction of the project, Project Review Team (PRT) meetings will be held every month wherein officials from the project and corporate centre will participate and discuss the progress and problems related to implementation of schedules of activities for construction, completion and commissioning. It will be ensured that all pollution control measures identified are implemented in a coordinated manner, linking the overall project implementation plans.

Monthly Operation Review Team (ORT) meetings for the project will be held during project operation. In these meetings in addition to routine Operation and Maintenance (O&M) problems issues related to environment will also be discussed. Dedicated groups for operation & maintenance of major systems like Bag Filters, Waste Treatment Plant, Solid Waste Utilization, etc. shall be formed. The issues related to the compliance of environmental norms including problems associated with the mitigation measures identified will be included in the agenda for quarterly review meetings, wherein action plan for remedial measures will be drawn and monitored. Company has developed Environment Policy and well laid Standard Operating Procedures to bring in any deviation / violation of the environment norms as prescribed by regulatory authorities.

The Head-Environment will brief the ORT about the environmental performance of the plant and all compliances/non-compliances are brought to the notice of MD. Action plan is drawn for rectifying the NC, budget is sanctioned (CAPEX & OPEX) and approval is obtained in the meeting itself. Minutes of the Meeting are prepared. In the next weekly review meeting, the action plan is discussed and the NC is closed.

The MD includes Environmental Performance as an Agenda in the monthly Board Meetings and circulates the MOMs. In this manner the Board of Directors are appraised of the Non-Compliances and CAPA taken to address the NC's.

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System Of Reporting Environmental Non-Compliances / Violations To The Board Of Directors are shown below:



## 1.3 EMP DURING CONSTRUCTION PHASE

The proponent has taken land in village Jatwar. The area of land is 14.1 acres or 57000 sq mtrs. During construction this land will be used for installation of plant and machineries, storage sheds for raw materials, construction of internal roads, parking area and temporary storage of construction materials including oil and chemicals, domestic waste etc.

The impacts due to construction activities will be limited to above area only.

Construction activities will have cumulative impact on environment due to impact on land, soil, air, water and noise environment as follows:

### 1.3.1 Land Environment

The site for project is flat and already levelled, hence no levelling is required. Earth excavated during civil foundations will be reused for raising the plinth and backfilling the columns. Dust generated due to earthwork including excavation and transportation activities, especially during dry weather conditions, will be controlled by water sprinkling.

### 1.3.2 Air Environment

Dust will be generated during clearing of ground vegetation, leveling of site, dumping of earth and fill material generated from site during drilling for ground water extraction, construction of foundations waste pit construction and other grading activities. During ground excavation site preparation in readiness for construction work may require vegetation clearance stripping off of overburden material, ground leveling and compaction. These activities will open-up the ground to wind action and will result in dust generation.

Impact on Air Quality -The air quality in the project area may slightly deteriorate for the time being during construction due to poorly paved service lane, excavation, delivery of building materials, mixing of construction materials, construction of temporary structures etc.

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Movement of trucks bringing plant and machinery shall also generate dust and noise. During construction phase, dust generation will be the main pollutant, which would generate from the site development activities and vehicular movement on the road. However, concentration of NO<sub>x</sub> and CO may slightly increase due to increased vehicular traffic movement.

### **1.3.3 Water Environment**

Temporary drainage work will be maintained, removed and reinstated as required, and all other precautions will be taken for avoidance of damage by flooding and silt. Sedimentation pit of sufficient capacity will be constructed to trap silt-laden water during monsoon. The wastewater will be reused for dust suppression.

### **1.3.4 Noise Environment**

The noise generated during the constructed phase will be due to the movement of vehicles and construction equipment. Construction equipment and transport vehicles will be properly maintained so that noise generation is minimized. Regular maintenance schedule will be adopted for all construction equipment and vehicles

### **1.3.5 Solid Waste Management**

Careful design, planning and good site management would minimize waste of materials such as concrete, mortars and cement grouts. Construction waste will be segregated as much as possible at site itself to increase the feasibility of recycling concrete and masonry as filling material and steel pieces as saleable scrap.

Muck shall be generated from drains and sedimentation pits. The muck shall be collected daily and stored at earmarked place. It shall be finally disposed within the plant premises for plinth raising purpose. Litter disposal and collection points shall be established around the all construction work sites. Construction waste shall be segregated as much as possible at site itself to increase the feasibility of recycling concrete and masonry as filling material and steel pieces as saleable scrap.

### **1.3.6 Sanitation & Safety Measures of Construction Workers**

Construction workers will be taken from surrounding villages. They will be made aware of possible hazards and safety measures that need to be taken during construction activities through organized training. Personal Protective Equipment (PPEs) such as dust masks, goggles, earplugs/ earmuffs, safety gloves, safety belts, safety shoe with toe protection, gumboots will be made available at construction site. Construction workers and vehicle drivers will be provided

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with drinking water, canteen and toilet/washroom facility. Rest room facility for truck drivers will be provided.

**1.3.7 Maintenance of Vehicles**

One should be very careful in selecting the site for vehicle maintenance, so as to prevent the ground water contamination due to the spillage of oil. Both diesel and petrol engine vehicles will be maintained properly. Unauthorized dumping of waste oil will be prohibited. Wastes will be disposed off to the SPCB approved vendors.

**1.4 EMP CONSIDERED DURING OPERATION PHASE**

**Air Pollution Dispersion Modeling Studies**

ISCST3 model has been used to predict the impact on air quality. The model uses regulatory defaults options and meets the guidelines developed by CPCB (PROBES/70/1997-1998). In the present study, one season February 2021 met data generated at site has been used. The mixing height has been taken from the atlas of hourly mixing height.

Meteorological data - One monthly, Hourly data on wind speed, wind direction, calm, atmospheric temperature, etc were used. In the present study, one season i.e. winter season meteorological data has been used for modeling purpose. The mixing height for study period and area is built-in the software.

**DG set of 500 KVA -2 sets with stack height of 30m will be used for power backup & Boiler capacity at MCR (100% Load)- 30 TPH at 45kg/cm<sup>2</sup>:**

Incremental load has been identified for Particulate Matter (PM), NO<sub>2</sub>, SO<sub>2</sub>, & CO. The Maximum GLC predicted for PM<sub>10</sub> is 0.37µg/m<sup>3</sup>, Maximum GLC predicted for PM<sub>2.5</sub> is 0.14 µg/m<sup>3</sup> Maximum GLC predicted for SO<sub>2</sub> is 0.36 µg/m<sup>3</sup>, Maximum GLC predicted for NO<sub>2</sub> is 2.16 µg/m<sup>3</sup>, Maximum GLC for CO is 0.82 µg/m<sup>3</sup>

**Table 1.3 DG Stack & Boiler Emission Details**

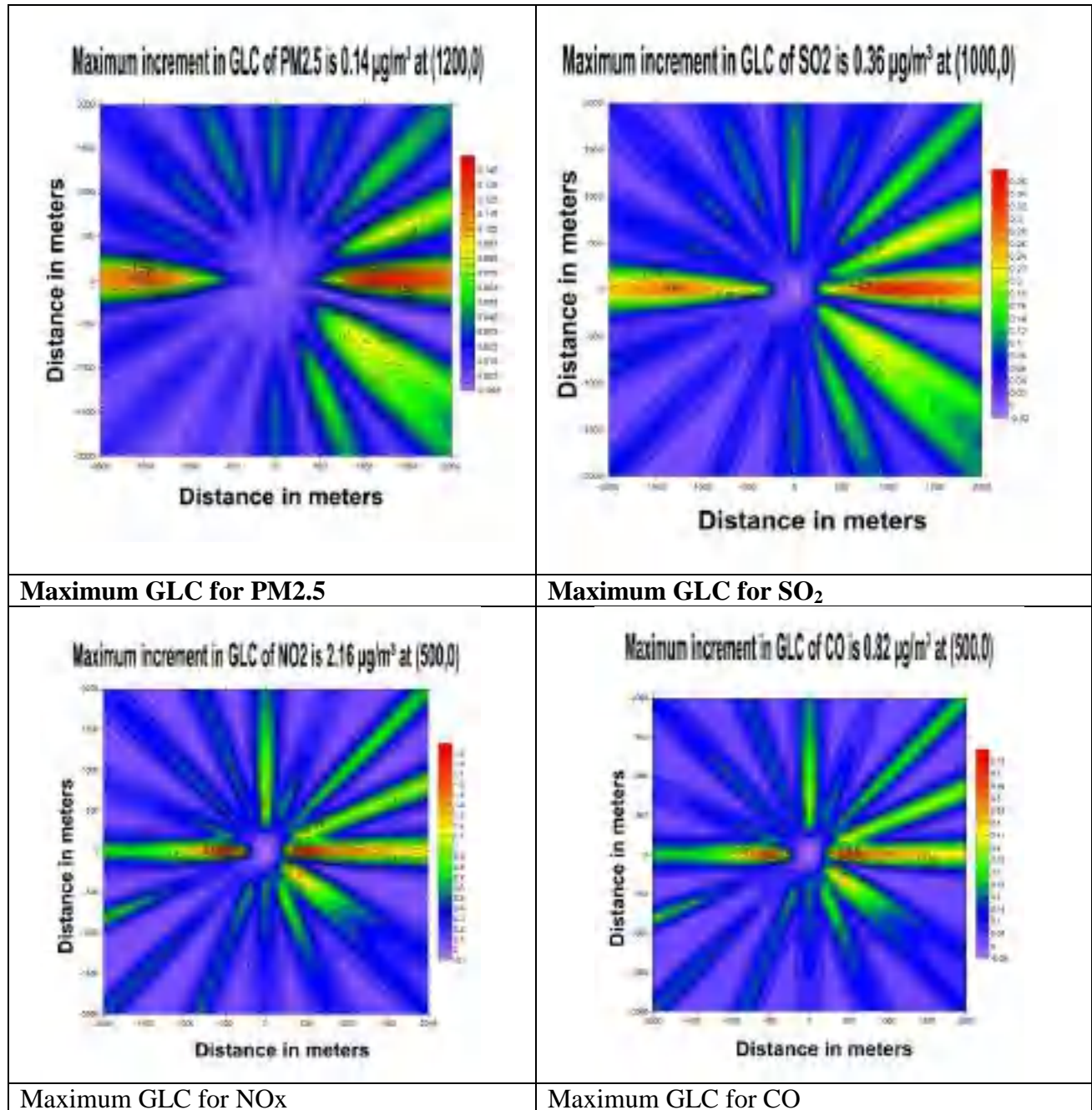
| Stack No. | DG set Capacity (kVA) | Stack & Flue details |                |          |              | Pollutants Emission |           |             |            |          |
|-----------|-----------------------|----------------------|----------------|----------|--------------|---------------------|-----------|-------------|------------|----------|
|           |                       | Height (m)           | velocity (m/s) | Temp (K) | Diameter (m) | NO2 (g/s)           | SO2 (g/s) | PM2.5 (g/s) | PM10 (g/s) | CO (g/s) |
| 1.        | 500                   | 30                   | 25             | 773      | 0.022        | 0.17                | 0.02      | 0.002       | 0.005      | 0.065    |
| 2.        | 500                   | 30                   | 25             | 773      | 0.022        | 0.17                | 0.02      | 0.002       | 0.005      | 0.065    |
| 3.        | 30TPH                 | 70                   | 08             | 773      | 0.104        | 0.025               | 0.31      | 0.18        | 0.45       | 0.002    |



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|   |       |      |       |      |       |
|---|-------|------|-------|------|-------|
| <b>Total Emission from 2 DG sets of total capacity (2 x 500 kVA ) in g/s &amp; from &amp; 1 boiler of 30TPH</b> | 0.365 | 0.35 | 0.184 | 0.46 | 0.132 |
|---|-------|------|-------|------|-------|

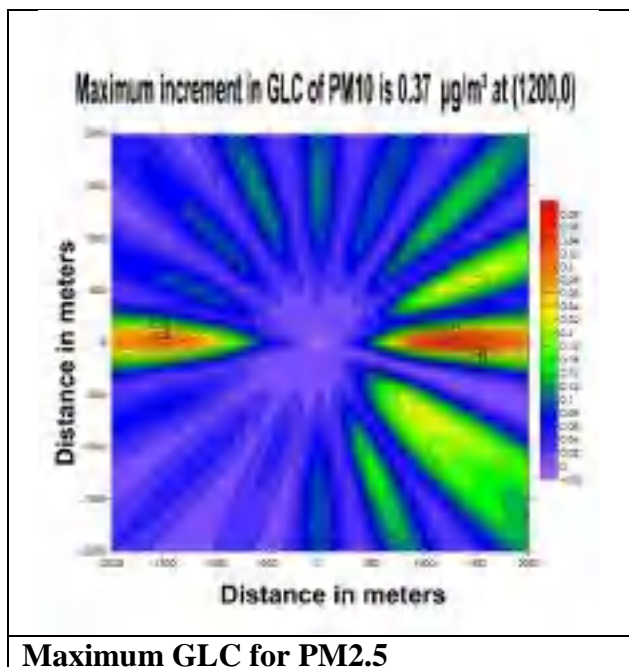
**Fig. No. 2- Isopleths of Particulate Matter (PM), NO<sub>2</sub>, SO<sub>2</sub>, & CO Around the Project (DG Stack)**





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**Table: - 1.4 Total incremental load**

| Description             | Background value<br>in $\mu\text{g}/\text{m}^3$ | Incremental<br>GLC in $\mu\text{g}/\text{m}^3$ | Total Predicted<br>GLC in $\mu\text{g}/\text{m}^3$ |
|-------------------------|---|--|--|
| <b>PM<sub>10</sub></b>  | 87.9  | 0.37   | 88.27  |
| <b>PM<sub>2.5</sub></b> | 50.9  | 0.14   | 51.04  |
| <b>NO<sub>2</sub></b>   | 19.7  | 2.16   | 21.86  |
| <b>SO<sub>2</sub></b>   | 6.2   | 0.36   | 6.56   |
| <b>CO</b>               | 500   | 0.82   | 500.82   |

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#### **1.4.1 Air Pollution Management Plan**

##### **Stack emissions**

- Online stack monitoring system will be provided to keep a check on emissions and implement proper measures in case of any failure or violation of prescribed standards.
- Regular cleaning, inspection and maintenance of air pollution control equipment will be carried out.
- Workers will be trained regarding emergency actions to be taken during equipment failure.
- The whole distillery unit will be provided with facility of inter locking so that any failure of equipment or APCE will result in instant shut down of the complete process.

#### **1.4.2 Action Plan for Control and Monitoring Of Fugitive Emissions**

The fugitive dust (PM) emissions occur from road, raw material unloading and loading, vehicle movement leading the re-suspension of settled dust, etc. Following mitigation measures are recommended for its control:

- Apply water to suppress dust generation namely use of Anti-smog guns, Water canons, Water sprinklers and Hydrant and hoses connected to water reservoir/tank
- Use of dust suppressants namely liquid polymer emulsion, agglomeration chemicals (lignosulphonates, polyacrylamides), cementitious products like lime and calcium sulphate, Petroleum based emulsions, Chloride salts (Mg and Ca)
- Use of scaffolding sheets /nets, wind fencing for dust control
- Stabilised concreted earthworks with stone, soil, geotextiles, vegetation, compacting.
- Use enclosures – covering for stockpiles – tarpaulin, plastic, fences, screens
- Keep proper shape of stockpiles (avoid steep slopes and faces)
- Remove muck from truck tyres and under bodies prior to leaving the plant premises
- Minimize the drop height of raw materials
- All road surfaces for permanent movement of trucks shall be paved (Concreted)
- Apply water spray in conjunction with cutting, grinding, drilling
- Provide enclosure around mixing process
- Use mechanical road sweeping machine for regular cleaning of roads
- Use industrial vacuum cleaner for cleaning all shop floors and roofs.
- Monitoring of fugitive dust emissions (at 20 upwind and downwind direction using HVS)

**Environmental Management Plan Report w.r.t Grain Based Distillery Plant (120 KLPD) along with Power Generation of 4.0 MW at Village-Jatwar, Block-Shahzadpur, Tehsil-Naraingarh, Distt.-Ambala, Haryana**

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### **1.4.3 Noise Pollution Management Plan**

During proposed project, the major noise-generating source will be machinery and equipment. The proposed equipment of the proposed plant would be designed for noise levels not exceeding 75 dB (A) at plant boundary.

In general the following methods will be adopted to control the noise pollution.

- The use of barricades
- The use of vibration insulation techniques at foundation of fans and other moving machinery.
- The use of mufflers, and acoustic louvers in DG sets.
- Proper plantation of trees.
- Providing earmuffs and earplugs to the plant personnel.

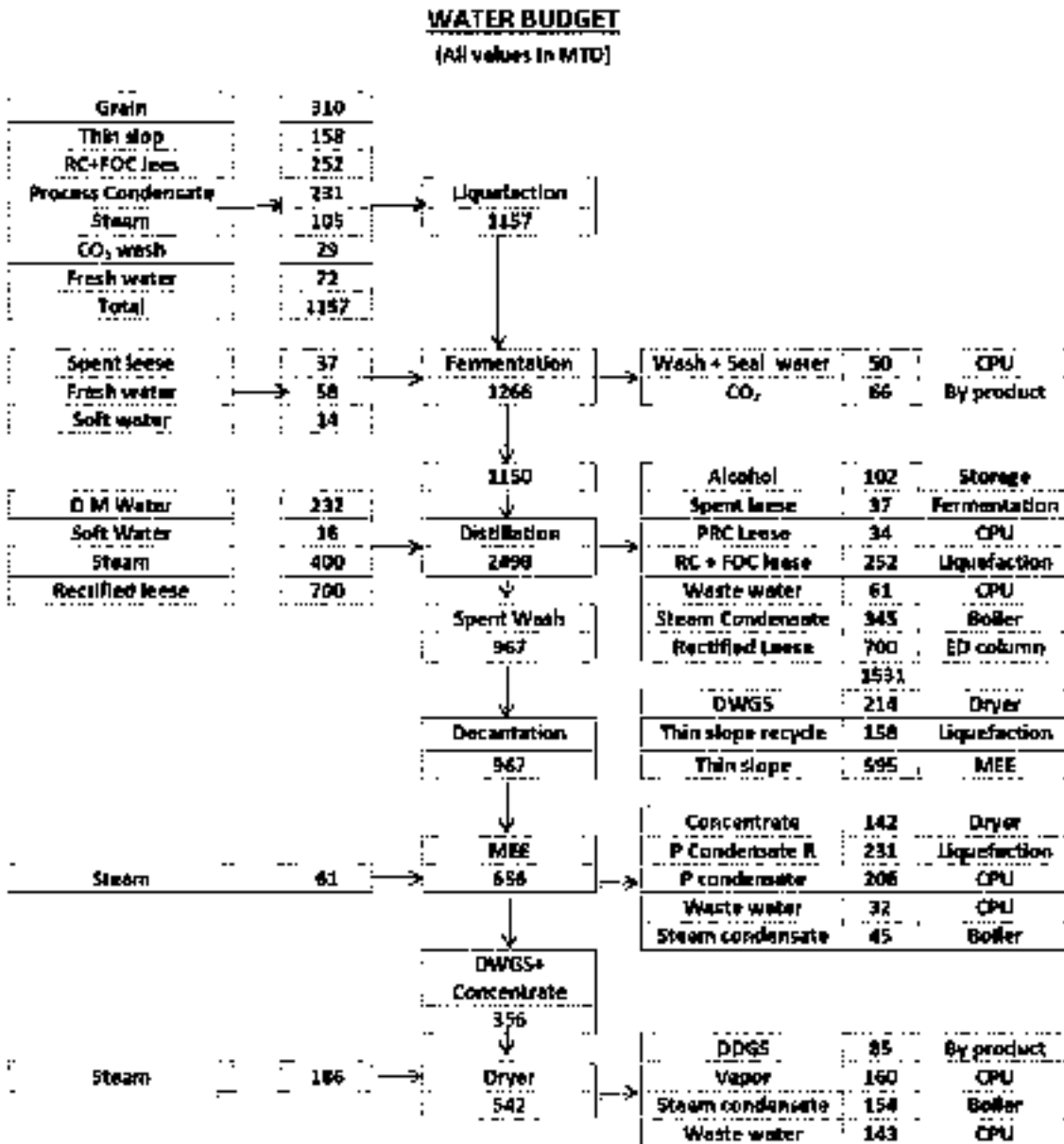
### **1.4.4 Water Pollution Management Plan**

#### **Water Requirement:**

One Time Total water requirement for the project will be 3563 KLD which will be further reduced through recycling & reuse to 2,095 KLD. 444 KLD will be fresh water demand for distillery plant @3.7KL/KL of Ethanol. The total fresh water demand for proposed project will be 652 KLD which will be sourced from ground water. The applications for permission of withdrawal of ground water has been submitted to CGWA vide application no - 20-3/20360/1/HR/IND/2021 dated 22.07.2021.

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**Table No. 1.5 Water Demand**



**Environmental Management Plan Report w.r.t Grain Based Distillery Plant (120 KLPD) along with Power Generation of 4.0 MW at Village-Jatwar, Block-Shahzadpur, Tehsil-Naraingarh, Distt.-Ambala, Haryana**

**Table No. 1.6: Water budget for 102 MTD or 120 KLPD Distillery**

| Water use   | Total       | Recycle     | Fresh water needed |
|---|-------------|-------------|--------------------|
| Process water   | 1508        | 1378        | 130                |
| DM +Soft water  | 304         | 0           | 304                |
| Vacuum sealing  | 40          | 40          | 0                  |
| Floor washing   | 45          | 45          | 0                  |
| Domestic  | 10          | 0           | 10                 |
| <b>Total</b>  | <b>1907</b> | <b>1463</b> | <b>444</b>         |
| Ratio   |             |             | 3.7KL/KL Ethanol   |
| <b>Water budget for 4 MW Cogen plant having rice husk fired 30 TPH boiler</b> |             |             |                    |
| Utility   | Requirement |             |                    |
| Boiler  | 840         | 632 Recycle | 208 D M Water      |
| Cooling   | 816         | 666 (Loss)  | 150 Blow down      |
| <b>Total</b>  | <b>1656</b> |             |                    |

**Table No. 1.7: Process Water requirement**

|                    | Total water needed | Recycle used |
|--------------------|--------------------|--------------|
| Thin slop          | 158                | 158          |
| RC+FOC lees        | 252                | 252          |
| Process Condensate | 231                | 231          |
| Fresh water        | 72                 | 0            |
| Spent leese        | 37                 | 37           |
| Fresh water        | 58                 | 0            |
| Rectified leese    | 700                | 700          |
|                    | <b>1508</b>        | <b>1378</b>  |

**Table No. 1.8: DM +Soft water requirement**

| DM soft water |            |
|---------------|------------|
| Distillation  | 232        |
| Distillation  | 16         |
| Fermentation  | 14         |
| CO2 scrubbing | 42         |
|               | <b>304</b> |

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**Table No. 1.9: Boiler water requirement**

| 30 TPH boiler    | Steam reqd | condensate | DM for boiler |
|------------------|------------|------------|---------------|
| Liquefaction     | 105        | 0          |               |
| Distillation     | 400        | 345        |               |
| MEE              | 61         | 45         |               |
| Dryer            | 186        | 154        |               |
| De-aerator + HPH | 88         | 88         |               |
|                  | 840        | 632        | 208           |

**Table No. 1.10: Cooling Tower Water Requirement**

| Cooling tower |     | 120 KLPD |           |     |
|---------------|-----|----------|-----------|-----|
| R O Permeate  | 756 | 816      | Evaporate | 666 |
| Soft water    | 60  |          | Blow down | 150 |

| Condensate Polishing unit (CPU) |             |                                      |
|---------------------------------|-------------|--------------------------------------|
| PRC Leese distillation          | 34          |                                      |
| Waste water distillation        | 61          |                                      |
| MEE condensate                  | 206         |                                      |
| MEE waste water                 | 32          |                                      |
| Dryer vapor condensate          | 160         |                                      |
| Dryer waste water               | 143         |                                      |
| Cooling tower blow down         | 150         |                                      |
| Boiler blow down                | 17          |                                      |
| Regeneration                    | 39          |                                      |
| CO2 wash                        | 33          |                                      |
| Vacuum sealing                  | 40          |                                      |
| Floor washing                   | 45          |                                      |
| CO2 Sealing                     | 50          |                                      |
| <b>Total</b>                    | <b>1010</b> | <b>Reuse</b>                         |
| RO Treatment permeate           | 891         | Cooling Tower :756                   |
|                                 |             | CO <sub>2</sub> scrubber sealing: 50 |
|                                 |             | vacuum Sealing: 40                   |
|                                 |             | Floor Washing: 45                    |
| RO Reject                       | 119         | Boiler ash dust suppression          |

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### **Water Quality Management**

The entire wastewater from the plant will be reused and there will be no discharge of wastewater outside the plant premises under normal circumstances. Following measures will be followed:

- Online monitoring System consisting of flow meter and camera to analyse ETP/CPU effluent quality will be installed.
- Proper maintenance of state of the art ETP/CPU will be carried out.
- Regular testing of samples at every outlet of ETP/CPU will be carried out to monitor the outcome after every treatment process.
- Regular monitoring and maintenance of equipment/machineries will be done and records maintained.
- Periodic checking to find out any leakages or areas susceptible to leaching will be undertaken in order to save the ground water contamination.
- Regular cleaning of all equipment and machineries will be done in order to avoid water clogging areas or any corrosion in the machinery and equipment.
- Grain Slops (Spent Wash i.e. 967 KLD) will be taken through Decaners Centrifuge for separation of Suspended Solids separated as Wet Cake. Thin Slops from the Decanter Centrifuge will be partly (20%) recycled back to Liquefaction Process), partly (20%) used in Analyser Column Reboiler for flash steam generation under vacuum and the balance (60%) taken to Multi Effect Evaporation Plant for concentration of thin slop to form a Syrup. This Syrup as Condensed Distillery Solubles (CDS) is mixed with the Wet Cake coming out of Decanter Centrifuge and the mixture is known as Distillers Wet Grain with Solubles (DWGS). DWGS will be fed to Dryers operating on steam and is dried to make it DDGS – Distillers Dried Grain with Solubles.

### **Action plan to control ground water pollution**

The proposed distillery will be based on “Zero Liquid Discharge”. The following measures will be adopted to prevent groundwater pollution:-

- During operation phase, spent wash will be treated and will not be discharged on soil/water.
- Treatment of secondary streams like spent lees, condensates, blow downs, etc. shall be in closed
- loop & any discharge outside the distillery shall not be done.
- Spillage of chemicals/ oils/ etc. will be avoided as best possible.
- The spent wash holding tank will be made up of RCC & steel.



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- Regular checking of spent wash storage lagoon will be carried out in order to check for any leakages or leaching.
- Monthly monitoring of ground water will be done in and around spent wash storage lagoon under environmental monitoring program and parameters will be checked in correlation with drinking water standards IS 10500-1991.
- In case of accidental spillage, proper measures will be undertaken immediately in order to prevent the substance from entering into ground water route.
- Storm water drains will be made along the plant boundary. Sedimentation pits will be provided along the storm water drains. The runoff will be discharged to municipal sewer.
- Garland drains will be provided along the raw material stock yard. The water will be collected in sedimentation tank, treated and then reused for dust suppression.

**Table No. 1.5 Inlet and Outlet Characteristics of Treated Process Effluent**

| <b>Parameters</b> | <b>Inlet characteristics</b> | <b>Outlet characteristics</b> |
|-------------------|------------------------------|-------------------------------|
| pH                | 6.5 - 8.5                    | 6.5 - 8.5                     |
| TSS               | 50 - 200mg/l                 | < 100 mg/l                    |
| Oil & Grease      | 10 - 35mg/l                  | < 10 mg/l                     |
| BOD               | 10-125                       | < 30                          |
| COD               | 20-250                       | <250                          |
| Iron              | 1.0 - 6mg/l                  | < 1.0 mg/l                    |
| Chromium          | 0.2 - 0.5 mg/l               | < 0.2 mg/l                    |
| Phosphates        | 5.0 - 15 mg/l                | < 5.0 mg/l                    |

### **Water Conservation**

The following measures will be adopted to minimize use of ground water-

- Maximum recycling and reuse of wastewater after treatment. Condensate water will be re used & recycled.
- Periodic preventive maintenance of water distribution system.
- Optimum use of process cooling water.
- Training and awareness on water conservation measures.
- Rainwater harvesting will be practised.

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Rainwater harvesting will be done at project site to harvest rainwater from the roof tops and use for various activities at the plant site to conserve fresh water and reduce the water requirement from other sources. Rain water will be collected through open channel & pipelines in to storage tank.

### 1.4.5 Solid Waste Generation & Disposal

The following will be the solid waste generation from the existing plant, proposed expansion project and method of disposal:-

- Maximum re-cycling and utilization of generated solid waste shall be done as per the guidelines.
- Unit will prepare Hazardous waste disposal plan, as per applicable statutory conditions under the Hazardous Wastes Act, 2016 and same will be implemented.
- EMC will keep a record of quantity of solid and hazardous waste generated and their proper disposal.
- A separate designated storage area shall be provided with sign boards/labels for storage of hazardous waste.
- The concerned person will prepare a site manual on the total program and activities of solid/hazardous waste management.
- Regular training of employees engaged in solid waste management works.
- The project proponent will explore possibilities of in-house brick manufacturing unit for utilization of fly ash.

### 1.4.6 Hazardous waste generation, storage & disposal

#### Waste oil: 1.5 KL / Annum

This will be stored in covered HDPE drums in a designated area and will be given to SPCB approved vendors.

**Table 1.6 Municipal Solid Waste Generation & Its Disposal**

| Type of Municipal Solid Waste                             |   | Proposed Method of Disposal  |
|---|---|--|
| Construction debris (generated during construction phase) | : | Used for landfill within the plant site to the extent possible and recyclables will be given to authorized recyclers.                                      |
| Canteen waste   | : | <ul style="list-style-type: none"><li>➤ Used in composting/Vermiculture.</li><li>➤ Used as manure for greenbelt development within the premises.</li></ul> |
| Recyclable materials                                      | : | Given to SPCB authorized dealers.  |

- The lead acid battery or dry battery will be given to authorized recycler having authorization from competent authority;

## **Environmental Management Plan Report w.r.t Grain Based Distillery Plant (120 KLPD) along with Power Generation of 4.0 MW at Village-Jatwar, Block-Shahzadpur, Tehsil-Naraingarh, Distt.-Ambala, Haryana**

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- E-waste generated from the plant will be given to authorized recycler having authorization from competent authority;

### **1.4.7 Odour management**

Odour Management Plan outlines the methods by which odorous emissions will systematically be assessed, reduced and prevented potentially from the distillery unit.

- A horticulturist will be employed to develop greenbelt according to CPCB guidelines and
- plantation of such trees that are known to prevent odours.
- Areas having odorous emissions will be covered from all sides with greenbelt/plantation.

### **1.5 DISASTER MANAGEMENT PLAN**

The Company will make provisions for on-site and off-site disaster management plan: For On-site disaster management plan, following points will be taken into consideration:

- To identify, assess, foresee and work out various kinds of possible hazards, their places, potential and damaging capacity and area in case of above happenings.
- Review, revise, redesign, replace or reconstruct the process, plant, vessels and control measures if so assessed.
- Measures to protect persons and property of processing equipment in case of all kinds of accidents, emergencies and disasters.
- To inform people and surroundings about emergency if it is likely to adversely affect them.

For off-site disaster management plan, following points will be taken into consideration:

- The plan will identify an emergency coordinating officer who would take overall command of the off-site activities.
- Proper co-ordination will be there between the company and outside regulatory authorities.

### **1.6 MEASURES FOR IMPROVEMENT OF ECOLOGY**

There is no ecologically sensitive area within 10 km radius of the proposed plant. No wildlife exists in the vicinity of the project. Plantation programme will be undertaken at several areas.

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### 1.6.1 Greenbelt Development

A greenbelt of 1.9 ha (33.0 %) will be developed in the plant premises. 10m–20m wide greenbelt will be developed around the plant premises.

Site Preparation: The location earmarked for greenbelt shall be fenced. The soil quality of the plant area is fit for plantation.

Plant propagation: Nursery raised saplings of 2–3 feet height of trees and shrubs will be purchased from local nursery and Forest Dept.

Plantation: This will include digging pits with proper spacing, filling pits with prepared soil, plantation of seedlings and watering. The size of the pit will be 1m x 1m x 1 m for trees and 0.5 m x 0.5 m x 0.5 m for shrubs.

The pits will be filled with soil mixture. The soil will be irrigated soaking wet prior to placing of seedling. The water required for greenbelt development will be met from the treated effluents generated during plant operation. During construction period water supply will be met from available sources.

Plantation will start from the beginning of construction activity (after the site is made clear and demarcating the green portion). Soil proposed to be filled in the pit after plantation will be mixed with compost (1:1). Plantation will be done after first rainfall. Adequate protection will be ensured for achieving high survival rate of the planted saplings. Water and nutrients / manure will be given at appropriate intervals.

Total Trees required as per CPCB/MoEF&CC Norms@2,500/Ha = 1.9 x 2,500 = 4,750No's

The species selection will depend upon type of soil and local species with good survival rate will be selected.

**Table: 1.7 List of Big Trees for Proposed Plantation is Given Below**

| S.No. | Common Name | Scientific Name        | Family        | No of Trees |
|-------|-------------|------------------------|---------------|-------------|
| 1.    | Arjun       | Terminalia arjuna      | Combretaceae  | 200         |
| 2.    | Ashwatha    | Ficus religiosa        | Moraceae      | 100         |
| 3.    | Akashmoni   | Acacia moniliformis    | Mimosaceae    | 100         |
| 4.    | Aam         | Mangifera indica       | Anacardiaceae | 100         |
| 5.    | Pipal       | Ficus benghalensis     | Moraceae      | 500         |
| 6.    | Chatim      | Alstonia scholaris     | Apocynaceae   | 250         |
| 7.    | Debdaru     | Polyalthia longifolia  | anonaceae     | 150         |
| 8.    | Ghora neem  | Melia azadirach        | Meliaceae     | 50          |
| 9.    | Ashok       | Saraca asoca           | Fabaceae      | 1000        |
| 10.   | Jarul       | Lagerstroemia speciosa | Lythraceae    | 50          |

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|       |              |                    |                |      |
|-------|--------------|--------------------|----------------|------|
| 11.   | Karanj       | Derris indica      | Fabaceae       | 400  |
| 12.   | Krishnachura | Delonix regia      | Caesalpinaceae | 50   |
| 13.   | Neem         | Azadirachta indica | Meliaceae      | 1000 |
| 14.   | Pakur        | Ficus infectoria   | Moraceae       | 100  |
| 15.   | Radhachura   | Amaltas            | Caesalpinaceae | 250  |
| 16.   | Tentul       | Tamarindus indica  | Caesalpinaceae | 300  |
| 17.   | Sisso        | Dalbergia sissoo   | Papilionaceae  | 150  |
| Total |              |                    |                | 4750 |

Species has been selected on following basis:-

- ❖ Fast growth;
- ❖ Capacity to endure water stress and climate extremes after initial establishment;
- ❖ Tolerance to specific conditions or alternatively wide adaptability to eco physiological conditions;
- ❖ Differences in height and growth habits;
- ❖ Pleasing appearances;
- ❖ Providing shade; and

Trees should be tall in peripheral curtain plantation, with large, spreading canopy in the primary and secondary attenuation zones.



Fig No. 3 Site layout/Green Belt Layout Plan

### **1.7 CONCEPT OF WASTE MINIMIZATION, 3R'S (REUSE, RECYCLE& RECOVER TECHNIQUES), ENERGY AND NATURAL RESOURCE CONSERVATION MEASURES**

The company has always considered environment as important element which can be impacted by the project activities. They believe in prevention than curing. They believe in concept of conservation & waste minimization.

#### **Waste Minimization – 3R's**

##### **(A) Reuse**

- Fly ash will be given to brick manufacturing unit.
- Yeast sludge will be added to wet cake.
- ETP sludge will be dewatered in filter press and will be disposed off as per applicable norms

##### **(B) Recycle**

- Spent Lees and PR lees will be recycled to fermentation column
- Recycling or usage of recycled water at every stage of the process
- The process water will be treated in CPU and recycled in the process and within plant premises.
- Used oil and grease from machineries/equipment will be treated and used.

##### **(C) Recovery**

- Concentrated spent wash will be used for the recovery of DWGS followed by DDGS to be used as cattle feed.
- CO<sub>2</sub> generated during the fermentation process will be recovered by CO<sub>2</sub> Scrubbers and sold to beverage & packaging industry.
- Water conservation & recirculation system shall be installed for recovery of cooling water.

#### **Energy Conservation**

The following measures will be adopted for reduction in specific energy consumption:-

- Installation of energy efficient lightings. Use of energy saving light fittings.
- Installation of LED/CFL lighting.
- Use of energy efficient electric motors complying IEE3 Standards.
- Use of DCS controls
- Use of highly efficient VFD, minimizing idle running of machines.
- Optimizing loads and periodic preventive maintenance & lubrication



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- Prevention of leakages of compressed air
- Optimized compressed air pressure.
- Periodic energy audits.
- Training, awareness and motivational programmes.
- Layout is designed for gravitation flow.
- Plant is designed for very low steam and power consumption with the use of state of art technology.

**Natural resource conservation**

- Power will be generated within plant premises and no external power supply required, instead surplus power will be exported to grid.
- Usage of rice husk as main fuel.
- Water will be conserved by practising rainwater harvesting and maximum recycling within plant premises.

**1.8 BUDGET FOR EMP**

The capital cost for environmental management of the proposed project is estimated to be Rs. 500 lakhs & Rs. 106 lakhs per year will be required as annual recurring expenses to meet the recurring expenditure for implementing the measures. The break-up of the investment is shown in **Table 1.8**.

**Table 1.8 Investment on Environmental Protection Measures (Rs. in Lakhs)**

| <b>S. No</b> | <b>Particulars</b>   | <b>Capital Cost<br/>In Rs lacs</b> | <b>Annual<br/>Recurring Cost<br/>in Rs lacs</b> |
|--------------|--|------------------------------------|---|
| 1            | Air pollution control system (ESP/Bag filter) on 30 TPH rice husk fired boiler       | 200                                | 30  |
| 2            | Scrubbing system, compressing system, liquefying system and storage for CO2 removal  | 75                                 | 15  |
| 3            | Treatment system for spent wash, DWGS centrifuge decanter, DDGS dryer for ZLD system | 105                                | 12  |
| 4            | Condensate Polishing unit for water treatment and recycle                            | 82                                 | 18  |
| 5            | Rainwater harvesting systems   | 20                                 | 5   |
| 6            | Occupational Health Management   | 8                                  | 4   |
| 7            | Noise Reduction Systems  | 4                                  | 2   |

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|    |                             |            |            |
|----|-----------------------------|------------|------------|
| 8  | Green Belt Development      | 6          | 5          |
| 9  | Environment monitoring      | -          | 5          |
| 10 | Environment management cell | -          | 10         |
|    | <b>Total</b>                | <b>500</b> | <b>106</b> |

### **1.9 CONCLUSION**

As discussed, it is safe to say that the proposed project is not likely to cause any significant impact on the ecology of the area, as adequate preventive measures will be adopted to maintain the various pollutants within permissible limits. Greenbelt development around the area would also be taken up as an effective pollution mitigation technique, as well as to control the pollutants released from the premises of the company.

Translation of Sale Deed No. 1115 dated 29.01.2021


Indian-Non Judicial Stamp  
Haryana Government



Date: 28/01/2021

Certificate No: AC282021A114

GRN No: 72044662



Stamp Duty Paid: ₹ 740700

Morality: ₹ 0

Seller / First Party Detail

Name: Ashok Kumar

H.No/Floor: 531

City/Village: Panchkula

Phone: 94\*\*\*\*\*00

Sector/Ward: 3

District: Panchkula

LandMark: Na

State: Haryana

Buyer / Second Party Detail

Name: Jvs Biofuels Pvt Ltd

H.No/Floor: Na

City/Village: Jatwar

Phone: 94\*\*\*\*\*00

Sector/Ward: Na

District: Ambala

LandMark: Na

State: Haryana

Purpose: Sale Deed

SALE DEED

E 5 AUG 2021

Seller: Ashok Kumar

Purchaser: JVS Biofuels Pvt. Ltd., Jatwar Sub-Tehsil Shahzadpur  
Tehsil Naraingarh Distt. Ambala

Consideration Amount: Rs 2,96,24,100/-

Stamp Duty paid Rs 7,40,700/- vide Haryana Government E-Stamp Certificate no. AC282021A114 GRN No. 72044662 dated 28.01.2021. E-Stamp attached.

Mauja: Jatwar Hadbast no. 41

Area: 112 Kanal 16 Marla


Kind of Land: Chahi

Collector Rate: Rs 19,00,000/- per acre

In presence of: Nil



- 5 AUG 2021

True and correct Translation  
from.....Hindi.....to English
  
Notary Panchkula (H)

I Ashok Kumar, s/o Shri Sadhu Ram s/o Shri Banarsi Dass, is a resident of House No. 931, Sector-8, Panchkula, Tehsil and District Panchkula, Haryana. Whereas today, in my full senses and consciousness and without any undue pressure, voluntarily, I am selling my agricultural land copy of the Jamabandi for the year 2015-2016 of the same, is attached. The details are as follows:-

Khewat no. 100, Khatauni 135, Khasra no. 40//12, 13, 14, 15, 16, 17, 18, 19, Kitte-8, Total measuring 64 Kanal i.e. 7/8 share equal to 56 Kanal and Khewat No. 113, Khatauni 151, Khasra no. 39//14, 15, 16, 17, 25, 40//11, 20, 21 Kite-8, Total measuring 62 Kanal 14 Marla, 495/1254 share equal to 24 Kanal 15 Marla and Khewat No. 8 Khatauni No. 10, Khasra no. 28//18, 23, 25, 40//3, 4, 8 Kite-6, measuring 32 Kanal 01 Marla (Total area 112 Kanal 16 Marla) situated in Mauja Jatwar Hadbast No. 41 Sub-Tehsil Shahzadpur, Tehsil Narayangarh District Ambala. Today, along with it, I have sold in actual all the rights of ingress and egress, passage, path, chirand, cultivation, air, light etc. and whatever rights appurtenant to it for the purpose of meeting essential domestic expenses as well as for purchase of other agricultural land for a consideration of Rs. 2,96,24,100/- (Rupees Two crore ninety six lakh twenty four thousand one hundred rupees) half of which is Rs. 1,48,12,050/- in favour of JVS Biofuels Pvt. Ltd., Jatwar Sub-Tehsil, Shahzadpur, Tehsil Narayangarh, Distt. Ambala. Out of the total amount of sale consideration, I have received cheque bearing no. 000003 dated 11.01.2021 for the

TASAHU  
KULA (HR)  
No. 5083  
e 17-12-2021

OF IN

UG 20.

True and correct Translation  
from Hindi to English

Sh  
Notary Panchkula (Hr.)



5 AUG 2021



sum of Rs. 25,00,000/- drawn at AU Small Finance Bank, Cheque bearing no. 132496 dated 11.01.2021 for a sum of Rs. 25,00,000/- drawn at by Punjab National Bank & Cheque bearing no. 548902 dated 11.01.2021 for a sum of Rs. 20,00,000/- drawn at State Bank of India and cash of Rs. 7,50,000/- and amount of Rs.2,18,74,100/- through UTR No.AUBLR52021012951126368 dated 29-01-2021. Out of the total amount, nothing remains to be paid before Joint Sub-Registrar. The possession as stands in me, has been delivered to the purchaser, It is in respect to the land Khasra No. 40//12, 13, 14, 17, 18, 19, 40//11, 20, 21, 28//18, 23, 25, 40//3, 4, 8 Total 103 Kanal 08 Marlas and 1 Kanal 8 Marla out of Khasra no. 39//14, 15 towards East and 8 Kanal out of Khasra no. 40//15, 16 towards West and it has been delivered in the same position to the purchaser/firm at the spot. Now, the purchaser/firm has become owner in possession of the aforesaid land. Now, the purchaser has the right to use the land in the way it likes. I or my legal heirs have no right of any kind in the same in any manner. The land is free from all kind of encumbrances. If there is any prior charge on the land from today, I will be liable for the same. The total expenses of the sale deed have been borne by the purchaser/firm. If later on, on account of any legal or other defect in the area or otherwise, the land goes out of the hands of purchaser/ firm without any consideration, then the seller and his legal heirs will be liable to pay the total consideration amount along with all the expenses incurred by the purchaser/ firm in connection with the execution of sale deed. Therefore, the sale deed has been reduced into writing as a proof on the instructions of Seller/Purchaser firm so that it may be used at the appropriate time. The contents of the Sale deed have

VVO  
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PANCH  
Rajd  
Expres  
DVT.

5 A



True and correct Translation  
from...Hindi...to English

*[Signature]*  
Notary Panchkula (H)

been read over to the parties who have admitted it to be correct. Scribbed by Anil Kumar Mittal Deed writer Narayangarh Regn no. ... dated ...

Place Narayangarh

Sd/- in English  
Ashok Kumar Seller

Sd/- in English  
From the Purchaser/ Firm Sunil Kumar Singla is present

Witness

Sd/- in English

Ajaib Singh s/o Shri Joginder Singh

R/o Kakkar Majra, Tehsil Narayangarh, Distt. Ambala

Witness

Sd/- in Hindi


Gurvinder Singh s/o Shri Jaggar Singh

R/o Jatwar, Tehsil Narayangarh, Distt. Ambala



True and correct Translation  
from Hindi to English

- 5 AUG 2021

  
Notary Panchkula (Hr.)

Document No. 1115  
Sale to Agro based/Food Processing Units/Enterprises, Rural area.  
Tehsil/Sub-Tehsil Shahjzadpur, Village/City Jatwar Jatwar, Place Jatwar  
Rural Out of the area of Abadi Deb.  
Address gghfg.

Dated 29.1.2021.

Agricultural Chahi.  
Khweat No. 100, 113, 8

Details of the Building.  
Details of the land  
112 Kanal 16 Marla

Amount Rs. 29624100/-  
Stamp No. ac282021a114  
Regn. Fee: Rs. 50000/-  
Drafted by

Details of the Amount  
Total Stamp Duty: Rs. 740602/-  
The amount of Stamp: Rs. 740700/-  
E-Challan: 72058287 Pasting Fee Rs. 3/-  
Service Charge Rs. 200/-

This document was presented for registration today i.e. 29.1.2021, day Friday, time 1.02.00 PM by Sh. Ashok Kumar s/o Sh. Sadhu Ram.

Sd/- Dy./ Joint Sub Registrar  
Shahjzadpur.

Sd/- Ashok Kumar in English.  
Signature of the Presentor.

The area mentioned in the document is notified u/s 7A of the Act, 1975 notified by the Country and Planning Department. Therefore, before registration of the document, No Objection Certificate has been obtained from the concerned Department.

OR

The area mentioned in the document is not notified u/s 7A of the Act, 1975 notified by the Country and Planning Department. Therefore, before registration of the document, No Objection Certificate is not required from the concerned Department.

Sd/- Dy./ Joint Sub Registrar  
Shahjzadpur.

Dated 29.1.2021  
Sd/- Ashok Kumar in English.  
Signature of the Presentor.

The aforementioned purchaser JVS Biofuels Pvt. Ltd, Through Sunil Kumar Singla is present. The contents of the document have been read over to both the sides and after understanding the same, they have accepted it. As per the document, nothing has been paid by the purchaser to the seller. The consideration amount has been paid as mentioned in the document and this factum has been admitted. Both the parties have been identified by Sh. Ajaib Singh Nambardar r/o Village Dabkora and Sh. Gurvinder Singh s/o Jaggat Singh r/o Jatwar.

We know witness No. 1 being Nambardar/Advocate and he identifies witness no. 2.  
Dated: 29.1.2021.

Sd/- Dy./ Joint Sub Registrar  
Shahjzadpur.



True and correct Translation  
from...Hindi...to English

Sh  
Notary Panchkula (Hr.)

- 5 AUG 2021



|           |            |            |
|-----------|------------|------------|
| Regn. No. | Reg. Year  | Book No.   |
| 1115.     | 2020-21    |            |
| Photo     | Photo      | Photo      |
| Seller.   | Purchaser. | Witnesses. |

Photo Dy./ Joint Sub Registrar  
Shahjadpur.

Seller: Sd/- Ashok Kumar  
Purchaser: Sd/- thru. Sunil Kumar Singla/JVS Biofuels Pvt.  
Witness No. 1. Sd/- Ajaib Singh Nambardar.  
Witness No. 2 Sd/- Gurvinder Singh.

### CERTIFICATE.

Certified that document no. 1115 has been registered today i.e. 20.1.2021, at Page 103.25, Bahi No. 1, Zild No. 506. A spare copy of it has been pasted at Page Nos. 16 to 18 in Bahi No. 1, Zild No. 130. It is also certified that the presenter of the document and the witnesses have signed/thumb marked in my presence.  
Dated: 29.1.2021.

Sd/- Dy./ Joint Sub Registrar  
Shahjadpur.



True and correct Translation  
from... Hindi ... to English  
Sh  
Notary Panchkula (Hr.)

- 5 AUG 2021

**HARYANA GOVERNMENT  
INDUSTRIES & COMMERCE DEPARTMENT**

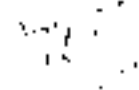
**Notification**

28<sup>th</sup> December, 2020

No.25/05/2020-4B-I. In supersession of the Enterprises Promotion Policy, 2015, the Governor of Haryana is pleased to notify the '**Haryana Enterprises & Employment Policy-2020**' attached as Annexure-'A', which will be effective from 01<sup>st</sup> January, 2021 for a period of five years.

The policy has been concurred by the Finance Department vide their U.O. No.11/67/2020-34D-11/2020/2023, dated 23<sup>rd</sup> December, 2020 and approved by the Council of Ministers in its meeting held on 23<sup>rd</sup> December, 2020.

Chandigarh:  
The 28<sup>th</sup> December, 2020

  
**A.K. SINGH**  
Principal Secretary to Government of Haryana,  
Industries & Commerce Department.

# HARYANA ENTERPRISES AND EMPLOYMENT POLICY, 2020

Department of Industries and Commerce,  
Government of Haryana

**14.13. Categorization of Blocks:** In order to ensure regional balanced growth, the entire State has been divided into 4 categories of blocks based on the level of industrialization, level of socio-economic development, locational advantage i.e. connectivity to highway, airport etc., state of infrastructure development and level of skill development that has taken place in these areas/blocks. The four categories are – Developed (A), Intermediate (B), Backward (C), & Most Backward (D) blocks. The list of these blocks is attached at Annexure-3. The Government may change the category of any block at any time depending upon the changed scenario.

**Criteria for Block Categorization**

| Parameters  | Weightage |
|---|-----------|
| <b>Level of Industrialization</b><br>(No. of enterprises, Investment, Employment)   | 45%       |
| <b>Socio-Economic Development</b><br>(Per capita GSDP of district, Number of Bank Branches per Lakh of population, Urbanization)  | 15%       |
| <b>Locational Advantage (Natural Growth)</b><br>(Connectivity to National and State highways, Connectivity to Airport, Connectivity to ICD, Length of surfaced road per 100sq.km, Connectivity to National Capital) | 20%       |
| <b>Infrastructure (developed by Govt./ Private agency)</b><br>(No. of ICDs/CFS, No. of Logistics Parks, No. of Industrial Parks, No. of MSME clusters)  | 15%       |
| <b>Skill Development</b><br>(No. of ITIs, No. of polytechnics, No. of Engg. Colleges, Other Skill development centers )   | 5%        |
| <b>Total</b>  | 100%      |

**14.14.** The details of incentives available for Ultra & Mega Projects, Large Projects and Micro, Small & Medium Enterprises have been given in the Annexure-4. **The Micro Enterprises set up in rural area within the jurisdiction of Village Panchayat, under Haryana Gramin Udyogik Vikas Yojna, shall not be required to submit CLU/NOC from Town & Country Planning for availing incentives.** The incentives under the policy will not be available to the industries covered under the restrictive list of industries (Annexure-5) except State Export Awards and State Awards. The Government may modify this list at any time depending upon the changed scenario.

**14.15.** The guidelines for Administration of each scheme of incentives and infrastructure will be notified separately by the State Government within 02 months.

**Note:** The detailed incentives/ infrastructure related schemes have been specified under Annexure – 4 of the Policy.

## List of 35 NO CLU Blocks

| Sr.No. | District      | Block             |
|--------|---------------|-------------------|
| 1.     | Ambala        | Shehzadpur        |
| 2.     | Bhiwani       | Tosham            |
| 3.     | Charkhi Dadri | Badhra            |
| 4.     | Charkhi Dadri | Jhohju Kalan      |
| 5.     | Bhiwani       | Bawani Khera      |
| 6.     | Bhiwani       | Bond Kalan        |
| 7.     | Bhiwani       | Kairu             |
| 8.     | Hisar         | Adampur           |
| 9.     | Jhajjar       | Sahlawas          |
| 10.    | Jhajjar       | Matenhail         |
| 11.    | Jind          | PilluKhera        |
| 12.    | Jind          | Alewa             |
| 13.    | Jind          | Ujhana            |
| 14.    | Kaithal       | Rajound           |
| 15.    | Kaithal       | Siwan             |
| 16.    | Kaithal       | Dhand             |
| 17.    | Karnal        | Nissing at Chirao |
| 18.    | Kurukshetra   | Babain            |
| 19.    | Mewat         | Nagina            |
| 20.    | Mewat         | Pingwan           |
| 21.    | Mahendergarh  | Ateli Nangal      |
| 22.    | Mahendergarh  | Kanina            |
| 23.    | Mahendergarh  | Nagal Chaudhary   |
| 24.    | Palwal        | Hassanpur         |
| 25.    | Rewari        | Khol at Rewari    |

Endst. No. 25/05/2020-4IB-1

Dated: 28.12.2020

A copy of the notification of Haryana Enterprises & Employment Policy, 2020 is forwarded to the Director, Industries & Commerce, Haryana, Chandigarh for information and necessary action.

(Wazir Singh)

Additional Director

for Principal Secretary, to Govt. Haryana,  
Industries & Commerce Department.

Endst. No. 25/05/2020-4IB-1

Dated: 28.12.2020

A copy of the notification is forwarded to the Director General, MSME, Haryana, Chandigarh for information and necessary action.

(Wazir Singh)

Additional Director

for Principal Secretary, to Govt. Haryana,  
Industries & Commerce Department.

Endst. No. 25/05/2020-4IB-1

Dated: 28.12.2020

A copy of the notification is forwarded to the Managing Director, Haryana State Industrial and Infrastructure Development Corporation Ltd., Sector-6, Panchkula for information and necessary action.

(Wazir Singh)

Additional Director

for Principal Secretary, to Govt. Haryana,  
Industries & Commerce Department.

Endst. No. 25/05/2020-4IB-1

Dated: 28.12.2020

A copy of the notification is forwarded to the Controller, Printing and Stationery, Haryana, Chandigarh with the request that the above notification may be published in Haryana Government Extra-Ordinary Gazette immediately.

(Wazir Singh)

Additional Director

for Principal Secretary, to Govt. Haryana,  
Industries & Commerce Department.

Endst. No. 25/05/2020-4IB-1

Dated: 28.12.2020

A copy of the notification is forwarded to the Director General, Information, Public Relations & Languages Haryana, Chandigarh for wide publicity.

(Wazir Singh)

Additional Director

for Principal Secretary, to Govt. Haryana,  
Industries & Commerce Department.

Enclt. No. 25/05/2020-4IB-1

Dated: 28.12.2020

A copy of the notification is forwarded to the Additional Chief Secretary to Govt. Haryana, Finance Department, Haryana, Chandigarh w.r.t to U.O. No.11/67/2020-3FD-III/2020/26223 dated 22.12.2020 for information and necessary action.



(Wazir Singh)

Additional Director

for Principal Secretary, to Govt. Haryana,  
Industries & Commerce Department

A

To

The Additional Chief Secretary to Govt. Haryana  
Finance Department

U.O. No. 25/05/2020-4IB-1

Dated 28.12.2020



Page 1 of 1

**Indian-Non Judicial Stamp  
Haryana Government**

Date: 28/01/2021

Stamp Duty Paid: ₹ 740700  
Penalty: ₹ 0

CEP/Code No: AC282021A114  
GRN No: 72044662

**Seller / First Party Detail**

Name: Ashok Kumar  
H.No/Floor: 331  
City/Village: Panchkula  
Phone: 94\*\*\*\*00

Sector/Ward: 8  
District: Panchkula  
State: Haryana

LandMark: Na

**Buyer / Second Party Detail**

Name: JVS Biofuels Pvt Ltd  
H.No/Floor: Na  
City/Village: Jatwar  
Phone: 94\*\*\*\*00

Sector/Ward: Na  
District: Ambala  
State: Haryana

LandMark: Na

Purpose: Sale Deed

The authenticity of this document can be verified by scanning the QR Code through smart phone or online website from Vigilance

## बेय नामा

बायान :- अशोक कुमार

मुरतरी :- JVS Biofuels Pvt. Ltd., Jatwar Sub-Tehsil Shahzadpur Tehsil  
Naraingarh Distt. Ambala

बदल मु० :- मु० 2.96.24.100/रु

Stamp Duty Paid Rs. 7,40,700/- vide Haryana Government E-Stamp Certificate  
No. AC282021A114 GRN No. 72044662 dated 28-01-2021. E-Stamp attached.

वाका :- जटवाड ६० न० ४१

एकवा :- ११२ कनाल १६ मरले

किसम :- चाही

कलक्टर रेट :- मु० १९.००.०००/रु प्रति एकड

रुक्कत :- कुछ नहीं

Ashok Kumar

JVS Biofuels Pvt. Ltd.  
Jatwar Sub-Tehsil Shahzadpur Tehsil  
Naraingarh Distt. Ambala

मन कि अशोक कुमार सपुत्र श्री सायू राम सपुत्र श्री बनारसी दास निवासी मकान न० 931 सेक्टर-8, पंचकुला तहसील व जिला पंचकुला, हरियाणा का हु। जो कि आज मे अपनी होश व ह्वास मे तथा सापधानी की हालत मे बिना किसी अनुचित श्बाव के अपनी खुशी से अपनी अराजी को बेय कर रहा हुं जिसकी नक्का जमाबन्दी साल 2015-2016 साथ शामिल है। व्गीर इस प्रकार है:-

खेत 100 खतीनी 135 खसरा न० 40//12, 13, 14, 15, 16, 17, 18, 19 किते-8 तदादी 64 कनाल का 7/8 भाग बकदर 56 कनाल व खेत 113 खतीनी 151 खसरा न० 39//14, 15, 16, 17, 25, 40//11, 20, 21 किते-8 तदादी 62 कनाल 14 मरले का 495/1254 भाग बकदर 24 कनाल 15 मरले व खेत 8 खतीनी 10 खसरा न० 28//18, 23, 25, 40//3, 4, 8 किते-6 तदादी 32 कनाल 01 मरले सालम (कुल रकबा 112 कनाल 16 मरले) वाका मीजा जटवाड़ ह० न० 41 सब-तहसील शहजादपुर तहसील नारायणगढ़ जिला अम्बाला आज मय तक दाखली खारजी, रास्सा, गोहर, काश्त, चरान्द, हवा, रोशनी आदी जो भी हक हकूक इस रकबा के बारा मे हासल है। वास्ते जल्दत खर्चा घरेलू व खरीदने दीगर अराजी के बदले मु० 2,96,24,100/रु (दो करोड़ छियासवे लाख चौबीस हजार एक सौ रुपये) जिनके आधे मु० 1,48,12,050/रु होते है। मे सहक JVS Biofuels Pvt. Ltd., Jatwar Sub-Tehsil Shahzadpur Tehsil Naraingarh Distt. Ambala के पास कतई तीर पर बेय कर दी है। कुल जर समन मे से

Ashok Kumar

Ashok Kumar

ASHOK KUMAR

Distt. Ambala, Haryana  
Shahzadpur, Naraingarh



मु० 25,00,000/रु का बैंक न० 000003 दिनांक 11-01-2021, AI Small Finance Bank  
 व मु० 25,00,000/रु का बैंक न० 132496 दिनांक 11-01-2021, पंजाब नेशनल बैंक व  
 मु० 20,00,000/रु का बैंक न० 548902 दिनांक 11-01-2021, स्टेट बैंक आफ इण्डिया  
 व मु० 7,50,000/रु नकद व मु० 2,18,74,100/रु की बु. टी. आर. न०  
 AUBILRS2021012951126368 dated 29-01-2021, के बसूल कर चुका हूँ। जो कि राशी  
 मुजरई कि आज रोक सामने श्रीमान सयुक्त रब रजिस्ट्रार महोदय के कोई राशी लेनी  
 बकाया नहीं है। कब्जा मीका पर जिस कदर मेरा खसरा न० 40//12, 13, 14, 17, 18,  
 19, 40//11, 20, 21, 28//18, 23, 25, 40//3, 4, 8 तदादी 103 कनाल 08 मरले  
 सालम व खसरा न० 39//14, 15 मे से 1 कनाल 08 मरले जानबे पुर्व व खसरा न०  
 40//15, 16 मे से 8 कनाल जानबे पश्चिम, की ओर है उसी कदर मुश्तरी/फर्म की ये  
 दिया है। अब मुश्तरी/फर्म रकबा बाला की मेरे समान मालिक व काबिज हो गई है। जैसे  
 चाहे अपने प्रयोग मे लावे मेरा व मेरे वारसान का कोई तालुक वास्ता किसी प्रकार का  
 नहीं है। रकबा हर प्रकार की मार से मुक्त है। यदि कोई मार आज से पहले किसी प्रकार  
 का हुआ तो मे स्वयं ही देनदार रहूंगा। कुल खर्चा बैय नामा का मुश्तरी/फर्म ने किया है।  
 अगर बैय करदा रकबा किसी नुक्स, कानूनी या दीगट बाक्यती से बिला अदाए जर  
 सफल के मुश्तरी/फर्म से निकल जाये तो मे बाचा खुद व मेरी दीगट जायदाद मुश्तरी/फर्म  
 के तमाम जर समय, खर्चा बैय नामा पर किए गए कुल खर्चों का देनदार रहूँगा। अतः यह

Ashutosh Kumar

Ashutosh Kumar  
 Ashutosh Kumar  
 Ashutosh Kumar

बेय नामा बाया व मुह्तरी/फर्म के कहे अनुसार लिख दिया हे। कि सन्द रहे समय पर काम आवे मजमून पढकर सुनाया गया सुनकर ठीक होना माना हे। लेखक अनिल कुमार मित्तल वसीका नवीस नारायणगढ़ रजि० न० ..... दिनांक:- .....

स्थान- नारायणगढ़

गवाह:-

अजय सिंह सपुत्र श्री जोगिन्द्र सिंह नि० ककड़माजरा  
तह० नारायणगढ़ जिला अम्बाला

अलअबद

अशोक कुमार बाया

गवाह:-

गुरबिन्द्र सिंह सपुत्र श्री जागर सिंह नि० जटवाड़  
तह० नारायणगढ़ जिला अम्बाला

मुह्तरी/मि०फर्म की ओर से  
सुनील कुमार सिंगला  
हाजिर हे।



Handwritten signature and text at the bottom right corner.

Reg. No.

Reg. Year

Book No.

ETM

2020-2021



विक्रंत



कंता



गवाह



उप/सयुक्त पंजीयन अधिकारी

विक्रंत :- अशोक कुमार अशोक कुमार अशोक कुमार Ashok Kumar

कंता :- धीरु सुनील कुमार सिंगला OTHERJVS Biofuels Pvt. Pranav Singh  
Ltd

गवाह 1 :- अर्जुन सिंह नम्बरदार Arjun Singh

गवाह 2 :- गुरविन्द सिंह Gurvind Singh

प्रमाण पत्र

प्रमाणित किया जाता है कि यह प्रलेख क्रमांक 1115 जाज दिनांक 29-01-2021 को बही नं 1 जिल्द न 506 के पृष्ठ न 103.25 पर किया गया तथा उसकी एक प्रति अतिरिक्त बही संख्या 1 जिल्द न 130 के पृष्ठ संख्या 16 से 18 पर चिपकाई गयी। यह भी प्रमाणित किया जाता है कि इस दस्तावेज के प्रस्तुतकर्ता और गवाहों ने अपने हस्ताक्षरनिशान अगूठ मरे सामने किये हैं।

दिनांक 29-01-2021

N  
उप/सयुक्त पंजीयन अधिकारी, सहजादपुर



Government of India  
Form GST REG-06  
[See Rule 10(1)]

Registration Certificate

Registration Number : 06AAFJ0823N1ZI

|   |  |  |   |    |                |
|---|--|--|---|----|----------------|
| 1.  | Legal Name                             | JVS BIOFUELS PRIVATE LIMITED   |   |    |                |
| 2.  | Trade Name, if any                     | JVS BIOFUELS PRIVATE LIMITED   |   |    |                |
| 3.  | Constitution of Business               | Private Limited Company  |   |    |                |
| 4.  | Address of Principal Place of Business | VILLAGE-JATWAR, SUB-TEHSIL- SHAHZADPUR, TEHSIL-NARAINGARH, JATWAR, Ambala, Haryana, 134201 |   |    |                |
| 5.  | Date of Liability                      |  |   |    |                |
| 6.  | Period of Validity                     | From   | 18/02/2021  | To | Not Applicable |
| 7.  | Type of Registration                   | Regular  |  |    |                |
| 8.  | Particulars of Approving Authority     |  |   |    |                |
| Signature   |  |  |   |    |                |
| Signature Not Verified<br>Digitally signed by DS GOODS AND SERVICES TAX NETWORK(4)<br>Date: 2021.02.18 10:45:38 IST |  |  |   |    |                |
| Name  |  |  |   |    |                |
| Designation   |  |  |   |    |                |
| Jurisdictional Office   |  |  |   |    |                |
| 9.  | Date of issue of Certificate           | 18/02/2021   |   |    |                |
| Note: The registration certificate is required to be prominently displayed at all places of business in the State.  |  |  |   |    |                |

This is a system generated digitally signed Registration Certificate issued based on the deemed approval of application on 18/02/2021 .



GSTIN 06AAFJ0823N1ZI  
Legal Name JVS BIOFUELS PRIVATE LIMITED  
Trade Name, if any JVS BIOFUELS PRIVATE LIMITED

**Details of Additional Places of Business**

Total Number of Additional Places of Business in the State 1

| Sr. No. | Address   |
|---------|---|
| 1       | H.NO. 210P, SECTOR-8, PANCHKULA, Panchkula, Haryana, 134109 |





GSTIN 06AAFCJ0823N1ZI  
Legal Name JVS BIOFUELS PRIVATE LIMITED  
Trade Name, if any JVS BIOFUELS PRIVATE LIMITED

**Details of Managing / Whole-time Directors and Key Managerial Persons**

|   |  |                    |                       |
|---|--|--------------------|-----------------------|
| 1 |   | Name               | SUNIL KUMAR SINGLA    |
|   |  | Designation/Status | DIRECTOR              |
|   |  | Resident of State  | Haryana               |
| 2 |   | Name               | JITENDRA KUMAR JINDAL |
|   |  | Designation/Status | DIRECTOR              |
|   |  | Resident of State  | Haryana               |
| 3 |  | Name               | VINOD KUMAR JINDAL    |
|   |  | Designation/Status | DIRECTOR              |
|   |  | Resident of State  | Haryana               |



| <b>TYPE OF ENTERPRISE</b>                                 | <b>MICRO</b>   | <b>MANUFACTURING</b>   |  |               |                     |             |                            |             |          |              |                               |  |  |               |                  |         |      |           |  |       |         |          |                        |  |        |            |        |                       |  |
|---|--|--|--|---------------|---------------------|-------------|----------------------------|-------------|----------|--------------|-------------------------------|--|--|---------------|------------------|---------|------|-----------|--|-------|---------|----------|------------------------|--|--------|------------|--------|-----------------------|--|
| <b>UDYAM REGISTRATION NUMBER</b>                          | <b>UDYAM-HR-13-0001982</b>   |  |  |               |                     |             |                            |             |          |              |                               |  |  |               |                  |         |      |           |  |       |         |          |                        |  |        |            |        |                       |  |
| <b>NAME OF ENTERPRISE</b>                                 | <b>M/S JVS BIOFUELS PRIVATE LIMITED</b>  |  |  |               |                     |             |                            |             |          |              |                               |  |  |               |                  |         |      |           |  |       |         |          |                        |  |        |            |        |                       |  |
| <b>SOCIAL CATEGORY OF ENTREPRENEUR</b>                    | <b>General</b>   |  |  |               |                     |             |                            |             |          |              |                               |  |  |               |                  |         |      |           |  |       |         |          |                        |  |        |            |        |                       |  |
| <b>NAME OF UNITS</b>                                      | <table border="1"> <thead> <tr> <th>SNo.</th> <th colspan="4">Units Name</th> </tr> </thead> <tbody> <tr> <td>1</td> <td colspan="4">JVS Biofuels Pvt. Ltd.</td> </tr> </tbody> </table>   |  |  |               | SNo.                | Units Name  |                            |             |          | 1            | JVS Biofuels Pvt. Ltd.        |  |  |               |                  |         |      |           |  |       |         |          |                        |  |        |            |        |                       |  |
| SNo.  | Units Name   |  |  |               |                     |             |                            |             |          |              |                               |  |  |               |                  |         |      |           |  |       |         |          |                        |  |        |            |        |                       |  |
| 1   | JVS Biofuels Pvt. Ltd.   |  |  |               |                     |             |                            |             |          |              |                               |  |  |               |                  |         |      |           |  |       |         |          |                        |  |        |            |        |                       |  |
| <b>OFFICAL ADDRESS OF ENTERPRISE</b>                      | <table border="1"> <thead> <tr> <th>Flat/Door/Block No.</th> <th>210</th> <th>Name of Premises/ Building</th> <th colspan="2">JVS house</th> </tr> </thead> <tbody> <tr> <td>Village/Town</td> <td>panchkula</td> <td>Block</td> <td colspan="2">sector 8</td> </tr> <tr> <td>Road/Street/Lane</td> <td>road 8B</td> <td>City</td> <td colspan="2">Panchkula</td> </tr> <tr> <td>State</td> <td>HARYANA</td> <td>District</td> <td colspan="2">PANCHKULA , Pin 134109</td> </tr> <tr> <td>Mobile</td> <td>9805478007</td> <td>Email:</td> <td colspan="2">jvsbiofuels@yahoo.com</td> </tr> </tbody> </table> |  |  |               | Flat/Door/Block No. | 210         | Name of Premises/ Building | JVS house   |          | Village/Town | panchkula                     | Block  | sector 8   |               | Road/Street/Lane | road 8B | City | Panchkula |  | State | HARYANA | District | PANCHKULA , Pin 134109 |  | Mobile | 9805478007 | Email: | jvsbiofuels@yahoo.com |  |
| Flat/Door/Block No.                                       | 210  | Name of Premises/ Building   | JVS house  |               |                     |             |                            |             |          |              |                               |  |  |               |                  |         |      |           |  |       |         |          |                        |  |        |            |        |                       |  |
| Village/Town  | panchkula  | Block  | sector 8   |               |                     |             |                            |             |          |              |                               |  |  |               |                  |         |      |           |  |       |         |          |                        |  |        |            |        |                       |  |
| Road/Street/Lane  | road 8B  | City   | Panchkula  |               |                     |             |                            |             |          |              |                               |  |  |               |                  |         |      |           |  |       |         |          |                        |  |        |            |        |                       |  |
| State   | HARYANA  | District   | PANCHKULA , Pin 134109                                 |               |                     |             |                            |             |          |              |                               |  |  |               |                  |         |      |           |  |       |         |          |                        |  |        |            |        |                       |  |
| Mobile  | 9805478007   | Email:   | jvsbiofuels@yahoo.com                                  |               |                     |             |                            |             |          |              |                               |  |  |               |                  |         |      |           |  |       |         |          |                        |  |        |            |        |                       |  |
| <b>DATE OF INCORPORATION / REGISTRATION OF ENTERPRISE</b> | <b>22/01/2021</b>  |  |  |               |                     |             |                            |             |          |              |                               |  |  |               |                  |         |      |           |  |       |         |          |                        |  |        |            |        |                       |  |
| <b>DATE OF COMMENCEMENT OF PRODUCTION/BUSINESS</b>        |  |  |  |               |                     |             |                            |             |          |              |                               |  |  |               |                  |         |      |           |  |       |         |          |                        |  |        |            |        |                       |  |
| <b>NATIONAL INDUSTRY CLASSIFICATION CODE(S)</b>           | <table border="1"> <thead> <tr> <th>SNo.</th> <th>NIC 2 Digit</th> <th>NIC 4 Digit</th> <th>NIC 5 Digit</th> <th>Activity</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>11 - Manufacture of beverages</td> <td>1101 - Distilling, rectifying and blending of spirits; ethyl alcohol production from fermented materials</td> <td>11019 - Distilling, rectifying and blending of spirits</td> <td>Manufacturing</td> </tr> </tbody> </table>  |  |  |               | SNo.                | NIC 2 Digit | NIC 4 Digit                | NIC 5 Digit | Activity | 1            | 11 - Manufacture of beverages | 1101 - Distilling, rectifying and blending of spirits; ethyl alcohol production from fermented materials | 11019 - Distilling, rectifying and blending of spirits | Manufacturing |                  |         |      |           |  |       |         |          |                        |  |        |            |        |                       |  |
| SNo.  | NIC 2 Digit  | NIC 4 Digit  | NIC 5 Digit  | Activity      |                     |             |                            |             |          |              |                               |  |  |               |                  |         |      |           |  |       |         |          |                        |  |        |            |        |                       |  |
| 1   | 11 - Manufacture of beverages  | 1101 - Distilling, rectifying and blending of spirits; ethyl alcohol production from fermented materials | 11019 - Distilling, rectifying and blending of spirits | Manufacturing |                     |             |                            |             |          |              |                               |  |  |               |                  |         |      |           |  |       |         |          |                        |  |        |            |        |                       |  |
| <b>DATE OF UDYAM REGISTRATION</b>                         | <b>31/01/2021</b>  |  |  |               |                     |             |                            |             |          |              |                               |  |  |               |                  |         |      |           |  |       |         |          |                        |  |        |            |        |                       |  |

Disclaimer: This is computer generated statement, no signature required.

Printed from <https://udyamregistration.gov.in>

For any assistance, you may contact:

1. DIC PANCHKULA
2. MSME-DI KARNAL





**Directorate of Town & Country Planning, Haryana**  
Plot No. 3, Sector 18-A, Madhya Marg, Chandigarh, Website: [tpharyana.gov.in](http://tpharyana.gov.in)  
Phone: 0172-2771300; E-mail: [tpharyana7@gmail.com](mailto:tpharyana7@gmail.com)

**To**

Mr/Ms. JVS BIOFUELS PRIVATE LIMITED THROUGH ITS DIRECTOR  
Sh Sunil Singla son of Sh Shri Ram Singla, Resident of 210 Sector 8 Panchkula,  
for the Industry at Village Jatwar, District Ambala,  
Haryana,

Memo No. E-Diary-111235/2021/TCP-OFA/368/2021      Dated: 15/02/2021

**Subject:** Application for Information/Verification for unit falling beyond Controlled Area but falling in Urban Area OR falling outside both controlled Area & Urban Area received vide diary no. TCP-OFA/2880/2021 dated 15/02/2021.

This has reference to your application for NOC outside Urban Areas / Controlled Areas vide diary no. TCP-OFA/2880/2021, dated 15/02/2021, Application No: NOC-5089A. Land details of the site are given below:

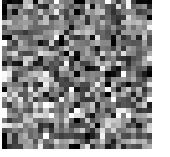
| Sr. No. | Revenue Estate | Rectangle No.(Mustil) | Kila/Khasra No. |
|---------|----------------|-----------------------|-----------------|
| 1       | JATWAR(41)     | 40                    | 12              |
| 2       | JATWAR(41)     | 40                    | 13              |
| 3       | JATWAR(41)     | 40                    | 14              |
| 4       | JATWAR(41)     | 40                    | 15              |
| 5       | JATWAR(41)     | 40                    | 16              |
| 6       | JATWAR(41)     | 40                    | 17              |
| 7       | JATWAR(41)     | 40                    | 18              |
| 8       | JATWAR(41)     | 40                    | 19              |
| 9       | JATWAR(41)     | 39                    | 14              |
| 10      | JATWAR(41)     | 39                    | 15              |
| 11      | JATWAR(41)     | 39                    | 16              |
| 12      | JATWAR(41)     | 39                    | 17              |
| 13      | JATWAR(41)     | 39                    | 25              |
| 14      | JATWAR(41)     | 40                    | 11              |
| 15      | JATWAR(41)     | 40                    | 20              |
| 16      | JATWAR(41)     | 40                    | 21              |
| 17      | JATWAR(41)     | 28                    | 18              |
| 18      | JATWAR(41)     | 28                    | 23              |
| 19      | JATWAR(41)     | 28                    | 25              |
| 20      | JATWAR(41)     | 40                    | 3               |
| 21      | JATWAR(41)     | 40                    | 4               |
| 22      | JATWAR(41)     | 40                    | 8               |

It is informed that the site as per the land details mentioned above, falls outside the Urban Areas / Controlled Areas.

This is further subject to following conditions:-

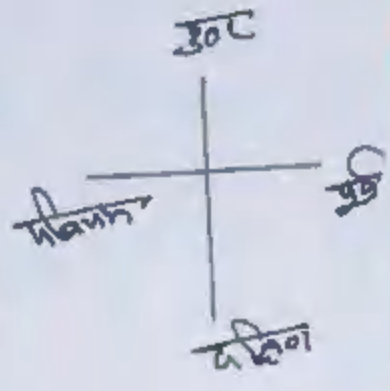
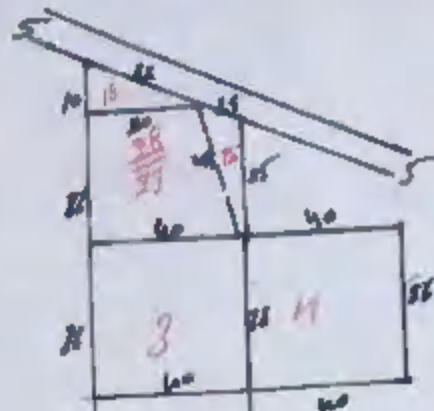
1. Department does not confirm the ownership title on the above land. It is the sole responsibility of the applicant who is entering the information.
  2. This memo only verifies the location of above stated land viz-a-viz Urban Areas / Controlled Areas.
  3. This information does not provide any immunity to applicability of any other Acts/Rules and regulations of the State Govt. as well as Govt. of India or any other instructions, if applicable to the site/area in question.
  4. As and when the site in question is covered under controlled area. you will have to seek fresh permission under the provisions of the Punjab Scheduled Roads and Controlled areas Restrictions of Unregulated Development Act , 1963.
  5. The applicant shall adopt the planning norms confirming to BIS and NBC standards during the actual execution of building at site and he shall be solely responsible for structural safety as well as provisions made for fire safety inside the building.
  6. The applicant shall not raise any construction within 30 meters restricted belt.
- Any breach of the above conditions shall construe automatic cancellation of this memo.

**NOTE: This is a system generated document and hence does not need signatures.**



काम के अंतिम चरण के लिए जो भी आवश्यक है

कुल क्षेत्रफल 40 मी. चौ. है  
 कुल लंबाई 200 X 180 मी.  
 फल 11 X 36 मी.



|    |       |    |    |       |    |    |    |    |
|----|-------|----|----|-------|----|----|----|----|
|    | 36    | 36 | 36 | 36    | 36 | 36 | 36 | 36 |
| 36 | 27/13 | 11 | 12 | 14/13 | 14 | 15 |    |    |
| 36 | 16    | 20 | 19 | 18    | 17 | 16 |    |    |
|    |       |    |    |       |    |    |    |    |
|    |       | 21 |    |       |    |    |    |    |

वीरगंज जी.  
 तहसील विद्यालय के लिए जंगल भूसांख्यिक  
 प्रस्ताव पत्र है। यहाँ पर  
 पुत्र ..... की धारणा पर ही गई।  
 अन्तर्गत कार्य जारी है।  
 11/2/21



**JVS BIOFUELS PRIVATE LIMITED**

**CIN: U24290HR2021PTC092409**

**REGD. OFFICE: H.NO. 210P, SECTOR-8 PANCHKULA  
HARYANA-134109**

**EMAIL:jvsbiofuels@yahoo.com**

**CERTIFIED TRUE COPY OF THE RESOLUTION PASSED AT THE MEETING OF BOARD OF DIRECTORS OF JVS BIOFUELS PRIVATE LIMITED HELD ON, WEDNESDAY 27TH JANUARY, 2021 AT 10:00 A.M. AT THE REGISTERED OFFICE AT H.NO. 210P, SECTOR-8 PANCHKULA, HARYANA-134109**


**"RESOLVED THAT** the Board of Directors do hereby appoint Mr. Sunil Kumar Singla, Director of the Company as Authorised Signatory of the Company for any changes of the Company on the Goods and Service Tax (GST), Town and Country Planning (TCP), Industrial Departments, CGWA and to sign and submit various document electronically and/or physically and to make applications, communications, representations, modifications or alterations on behalf of the Company before the Central GST and/or the concerned State GST authorities, TCP, Industrial Departments, CGWA as and when required.

**"FURTHER RESOLVED THAT** Mr. Sunil Kumar Singla, Director of the Company be and is hereby authorized to represent the Company and to take necessary actions on GST, TCP, INDUSTRIAL DEPARTMENTS, CGWA, related issues including but not limited to presenting documents/records etc., on behalf of the Company liaising/representing for registration of the Company under GST, TCP, Industrial Departments, CGWA and also to make any alterations, additions, corrections, to the documents, papers, forms, etc., filed with other Government authorities as and when required."

Certified to be true copy  
For JVS BIOFUELS PRIVATE LIMITED



**Vinod Kumar Jindal**  
Director  
Din: 07928222



**Jitendra Kumar Jindal**  
Director  
Din: 09039801



# JVS BIOFUELS PRIVATE LIMITED

SOLUTIONS FOR A POWERFUL FUTURE

Date, 12.02.2021

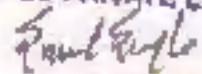
## CONSULTANT AUTHORIZATION LETTER

I, **Suzil Kumar Singla** (Authorized Signatory) on behalf of JVS Biofuels Pvt. Ltd., had hired M/s Grass Roots Research & Creation India (P) Ltd, an environmental consultancy organization, which is QCI/NABET accredited for obtaining prior Environmental Clearance. The consultant was authorized to take care of all MoEFCC, Govt, New Delhi, submissions, meetings and all other required correspondences from time to time w.r.t EC Proposed Grain Based 120 KLPD Distillery along with Cogeneration Power Plant of 4.0 MW at Village -Jatwar, Tehsil- Shahzadpur, Dist- Ambala, State- Haryana.

For of JVS Biofuels Pvt. Ltd.

For JVS BIOFUELS PRIVATE LTD.

Name:



DIRECTOR

# JVS BIOFUELS PRIVATE LIMITED

SOLUTIONS FOR A POWERFUL FUTURE

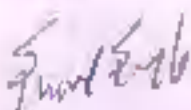
Date - 04.02.2021

## AUTHORIZATION UNDERTAKING

This is to certify that ..... (Authorized Signatory) whose specimen is attested here below is authorized to represent/sign all papers/documents and make decision on behalf of the company related to Environmental Clearance from the office of SEIAA/SEAC, Haryana.

He will be representative on behalf of M/s J.V.S Biofuel Pvt. Ltd., w.r.t EC of Grain Based 120 KLPO Distillery along with Cogeneration Power Plant of 4.0 MW at Village -Jatwar, Tehsil- Shahzadpur, Dist- Ambala, State - Haryana.

For M/s J.V.S Biofuel Pvt. Ltd

  
Name :- Director  
{Designation}

(Authorized Signatory)  
Specimen Signature

**JVS BIOFUELS PRIVATE LIMITED**

H.NO. 210P, SECTOR-8, PANCHKULA  
HARYANA, INDIA, 134109  
CONTACT :- 9605478007, 9417201318, 9418016135  
EMAIL ID - jvsbiofuels@yahoo.com



# GRC INDIA TRAINING & ANALYTICAL LABORATORY

(A unit of Grass Roots Research & Creation India (P) Ltd.)

An ISO 9001: 2015, ISO 14001: 2015&ISO45001: 2018 (OH&S) Certified Lab.

NABL Accredited Laboratory (A Constituent Board of QCI) , TC 7501 (Chemical & Biological)

Recognized by Ministry of Environment, Forest & Climate Change (MoEF&CC, GOI) under the E (P) Act, 1986

Head Office: F-375, Sector-63, Noida, Gautam Budh Nagar, U.P – 201 301

Phone No.: 0120 – 4044630, 4044660, 4323120, Fax: 0120 – 2406519, 0120 - 4044675

Website: <https://www.grc-india.com>, E-mail : [lab@grc-india.com](mailto:lab@grc-india.com); [info@grc-india.com](mailto:info@grc-india.com)

ANNEXURE-  
XIII

## Test Report

**Report Code: A20210227-001**

**Issue Date: 27.02.2021**

**Issued To:** Grain based Distillery "M/s JVS Biofuel Pvt Ltd"  
120 KLPD along with 4.0 MW power plant,  
Vill-Jatwar, Tehsil Shahzadpur, Dist. Ambala, Haryana.

**Analysis Duration:** 03.02.2021 to 27.02.2021

**Sample Description:** Ambient Air

### RESULTS

(Ambient Air Quality Analysis)

#### SAMPLING DETAILS

|                                       |  |
|---------------------------------------|--|
| <b>Sampling Location</b>              | : Project site                                     |
| <b>Sample Collected by</b>            | : Mr. Rameshwar Kumar                              |
| <b>Sampling Protocol</b>              | : GRC/LAB/STP/AIR/01                               |
| <b>Weather Condition</b>              | : Clear Sky  |
| <b>Sampling Duration</b>              | : 24 Hours   |
| <b>Sampling Duration for CO</b>       | : 1 Hour   |
| <b>Sampler Location w.r.t. Height</b> | : 4.0 Meter above Ground Level                     |
| <b>Sample Packing &amp; Marking</b>   | : Plastic Bottle / Zip Polybag & JVSB/FEB/A001-008 |

| S. No. | Date       | Test Parameter                                |  |   |  |   |
|--------|------------|---|--|---|--|---|
|        |            | Particulate Matter (PM2.5); µg/m <sup>3</sup> | Particulate Matter (PM10); µg/m <sup>3</sup> | Sulphur Dioxide (SO <sub>2</sub> ); µg/m <sup>3</sup> | Nitrogen Dioxide (NO <sub>2</sub> ); µg/m <sup>3</sup> | Carbon Monoxide, (CO) µg/m <sup>3</sup> |
|        |            | GRC/LAB/STP/AIR/03, Gravimetric Method        | IS 5182 (Part 23):2006 (RA 2017)             | IS 5182 (Part 2) :2001, (RA 2017)                     | IS 5182 (Part 6) :2006 (RA 2017)                       | IS 5182 (Part 10) :1999, (RA 2014)      |
| 1      | 01.02.2021 | 43.7  | 81.2   | 5.2   | 16.5   | 490.0                                   |
| 2      | 04.02.2021 | 38.1  | 77.0   | 5.4   | 15.8   | 440.0                                   |
| 3      | 08.02.2021 | 40.0  | 75.7   | 5.6   | 18.0   | 450.0                                   |
| 4      | 12.02.2021 | 45.9  | 78.2   | 5.6   | 17.0   | 420.0                                   |
| 5      | 15.02.2021 | 50.2  | 86.1   | 5.3   | 13.6   | 480.0                                   |
| 6      | 18.02.2021 | 37.0  | 75.2   | 5.4   | 15.8   | 460.0                                   |
| 7      | 22.02.2021 | 45.0  | 84.7   | 6.2   | 17.7   | 470.0                                   |
| 8      | 25.02.2021 | 39.2  | 87.9   | 5.7   | 15.7   | 360.0                                   |

**\*\*End of Report\*\***

Narender Singh (Chemist)  
  
 Authorized Signatory  
 (Seal & Signature)

- Note:
- 1.The results indicated only refer to the tested samples and listed parameters and do not endorse any product
  2. This certificate shall not be reproduced wholly or in part without prior written consent of the laboratory.
  3. This certificate shall not be used in any advertising media or as evidence in the court of Law without prior written consent of the laboratory
  4. The samples received shall be destroyed after 30 days from the date of issue of the certificate unless specified otherwise and sample for biological testing will be destroyed after one week of testing.



# GRC INDIA TRAINING & ANALYTICAL LABORATORY

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Head Office: F-375, Sector-63, Noida, Gautam Budh Nagar, U.P – 201 301

Phone No.: 0120 – 4044630, 4044660, 4323120, Fax: 0120 – 2406519, 0120 - 4044675

Website: <https://www.grc-india.com>, E-mail : [lab@grc-india.com](mailto:lab@grc-india.com); [info@grc-india.com](mailto:info@grc-india.com)

## Test Report

**Report Code: A20210227-002**

**Issue Date: 27.02.2021**

**Issued To:** Grain based Distillery "M/s JVS Biofuel Pvt Ltd"  
120 KLPD along with 4.0 MW power plant,  
Vill-Jatwar, Tehsil Shahzadpur, Dist. Ambala, Haryana.

**Analysis Duration:** 03.02.2021 to 27.02.2021

**Sample Description:** Ambient Air

### RESULTS

(Ambient Air Quality Analysis)

#### SAMPLING DETAILS

|                                       |  |
|---------------------------------------|--|
| <b>Sampling Location</b>              | : Barana jattan                                    |
| <b>Sample Collected by</b>            | : Mr. Rameshwar Kumar                              |
| <b>Sampling Protocol</b>              | : GRC/LAB/STP/AIR/01                               |
| <b>Weather Condition</b>              | : Clear Sky  |
| <b>Sampling Duration</b>              | : 24 Hours   |
| <b>Sampling Duration for CO</b>       | : 1 Hour   |
| <b>Sampler Location w.r.t. Height</b> | : 4.0 Meter above Ground Level                     |
| <b>Sample Packing &amp; Marking</b>   | : Plastic Bottle / Zip Polybag & JVSB/FEB/A001-008 |

| S. No. | Date       | Test Parameter                                |  |   |  |   |
|--------|------------|---|--|---|--|---|
|        |            | Particulate Matter (PM2.5); µg/m <sup>3</sup> | Particulate Matter (PM10); µg/m <sup>3</sup> | Sulphur Dioxide (SO <sub>2</sub> ); µg/m <sup>3</sup> | Nitrogen Dioxide (NO <sub>2</sub> ); µg/m <sup>3</sup> | Carbon Monoxide, (CO) µg/m <sup>3</sup> |
|        |            | GRC/LAB/STP/AIR/03, Gravimetric Method        | IS 5182 (Part 23):2006 (RA 2017)             | IS 5182 (Part 2) :2001, (RA 2017)                     | IS 5182 (Part 6) :2006 (RA 2017)                       | IS 5182 (Part 10) :1999, (RA 2014)      |
| 1      | 01.02.2021 | 39.1  | 64.9   | 5.2   | 13.2   | 450                                     |
| 2      | 04.02.2021 | 36.6  | 67.7   | 5.4   | 14.6   | 380                                     |
| 3      | 08.02.2021 | 41.8  | 74.5   | 6.4   | 19.8   | 470                                     |
| 4      | 12.02.2021 | 42.2  | 69.1   | 5.1   | 13.4   | 390                                     |
| 5      | 15.02.2021 | 43.7  | 69.2   | 5.3   | 12.6   | 460                                     |
| 6      | 18.02.2021 | 44.2  | 73.1   | 6.1   | 13.8   | 500                                     |
| 7      | 22.02.2021 | 41.5  | 67.0   | 5.3   | 11.6   | 440                                     |
| 8      | 25.02.2021 | 43.8  | 73.1   | 6.1   | 14.4   | 420                                     |

**\*\*End of Report\*\***

Narender Singh (Chemist)  
  
 Authorized Signatory  
 (Seal & Signature)

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## Test Report

**Report Code: A20210227-003**

**Issue Date: 27.02.2021**

**Issued To:** Grain based Distillery "M/s JVS Biofuel Pvt Ltd"  
120 KLPD along with 4.0 MW power plant,  
Vill-Jatwar, Tehsil Shahzadpur, Dist. Ambala, Haryana.

**Analysis Duration:** 03.02.2021 to 27.02.2021

**Sample Description:** Ambient Air

### RESULTS

(Ambient Air Quality Analysis)

#### SAMPLING DETAILS

|                                       |  |
|---------------------------------------|--|
| <b>Sampling Location</b>              | : Vill-Samru                                       |
| <b>Sample Collected by</b>            | : Mr. Rameshwar Kumar                              |
| <b>Sampling Protocol</b>              | : GRC/LAB/STP/AIR/01                               |
| <b>Weather Condition</b>              | : Clear Sky  |
| <b>Sampling Duration</b>              | : 24 Hours   |
| <b>Sampling Duration for CO</b>       | : 1 Hour   |
| <b>Sampler Location w.r.t. Height</b> | : 4.0 Meter above Ground Level                     |
| <b>Sample Packing &amp; Marking</b>   | : Plastic Bottle / Zip Polybag & JVSB/FEB/A001-008 |

| S. No. | Date       | Test Parameter   |   |   |  |   |
|--------|------------|--|---|---|--|---|
|        |            | Particulate Matter (PM <sub>2.5</sub> ); µg/m <sup>3</sup> | Particulate Matter (PM <sub>10</sub> ); µg/m <sup>3</sup> | Sulphur Dioxide (SO <sub>2</sub> ); µg/m <sup>3</sup> | Nitrogen Dioxide (NO <sub>2</sub> ); µg/m <sup>3</sup> | Carbon Monoxide, (CO) µg/m <sup>3</sup> |
|        |            | GRC/LAB/STP/AIR/03, Gravimetric Method                     | IS 5182 (Part 23):2006 (RA 2017)                          | IS 5182 (Part 2) :2001, (RA 2017)                     | IS 5182 (Part 6) :2006 (RA 2017)                       | IS 5182 (Part 10) :1999, (RA 2014)      |
| 1      | 01.02.2021 | 46.6   | 81.2  | 5.4   | 15.3   | 470                                     |
| 2      | 04.02.2021 | 43.1   | 82.1  | 5.0   | 15.8   | 460                                     |
| 3      | 08.02.2021 | 46.2   | 84.7  | 5.7   | 14.1   | 450                                     |
| 4      | 12.02.2021 | 42.4   | 78.6  | 5.0   | 15.3   | 370                                     |
| 5      | 15.02.2021 | 41.1   | 85.4  | 5.8   | 15.9   | 460                                     |
| 6      | 18.02.2021 | 42.7   | 79.3  | 5.0   | 14.4   | 380                                     |
| 7      | 22.02.2021 | 40.6   | 81.9  | 5.3   | 14.8   | 500                                     |
| 8      | 25.02.2021 | 41.4   | 80.1  | 5.1   | 14.3   | 410                                     |

**\*\*End of Report\*\***

Narender Singh (Chemist)  
  
 Authorized Signatory  
 (Seal & Signature)

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Website: <https://www.grc-india.com>, E-mail : [lab@grc-india.com](mailto:lab@grc-india.com); [info@grc-india.com](mailto:info@grc-india.com)

## Test Report

**Report Code: A20210227-004**

**Issue Date: 27.02.2021**

**Issued To:** Grain based Distillery "M/s JVS Biofuel Pvt Ltd"  
120 KLPD along with 4.0 MW power plant,  
Vill-Jatwar, Tehsil Shahzadpur, Dist. Ambala, Haryana.

**Analysis Duration:** 03.02.2021 to 27.02.2021

**Sample Description:** Ambient Air

### RESULTS

(Ambient Air Quality Analysis)

#### SAMPLING DETAILS

|                                       |  |
|---------------------------------------|--|
| <b>Sampling Location</b>              | : Vill-Jatwar                                      |
| <b>Sample Collected by</b>            | : Mr. Rameshwar Kumar                              |
| <b>Sampling Protocol</b>              | : GRC/LAB/STP/AIR/01                               |
| <b>Weather Condition</b>              | : Clear Sky  |
| <b>Sampling Duration</b>              | : 24 Hours   |
| <b>Sampling Duration for CO</b>       | : 1 Hour   |
| <b>Sampler Location w.r.t. Height</b> | : 4.0 Meter above Ground Level                     |
| <b>Sample Packing &amp; Marking</b>   | : Plastic Bottle / Zip Polybag & JVSB/FEB/A001-008 |

| S. No. | Date       | Test Parameter                                |  |   |  |   |
|--------|------------|---|--|---|--|---|
|        |            | Particulate Matter (PM2.5); µg/m <sup>3</sup> | Particulate Matter (PM10); µg/m <sup>3</sup> | Sulphur Dioxide (SO <sub>2</sub> ); µg/m <sup>3</sup> | Nitrogen Dioxide (NO <sub>2</sub> ); µg/m <sup>3</sup> | Carbon Monoxide, (CO) µg/m <sup>3</sup> |
|        |            | GRC/LAB/STP/AIR/03, Gravimetric Method        | IS 5182 (Part 23):2006 (RA 2017)             | IS 5182 (Part 2) :2001, (RA 2017)                     | IS 5182 (Part 6) :2006 (RA 2017)                       | IS 5182 (Part 10) :1999, (RA 2014)      |
| 1      | 01.02.2021 | 34.4  | 77.3   | 5.4   | 18.6   | 420                                     |
| 2      | 04.02.2021 | 36.8  | 69.9   | 5.1   | 18.0   | 490                                     |
| 3      | 08.02.2021 | 37.4  | 72.8   | 5.4   | 19.7   | 460                                     |
| 4      | 12.02.2021 | 49.3  | 85.2   | 5.4   | 18.6   | 440                                     |
| 5      | 15.02.2021 | 50.9  | 87.9   | 5.3   | 17.9   | 460                                     |
| 6      | 18.02.2021 | 38.4  | 79.1   | 6.2   | 17.0   | 500                                     |
| 7      | 22.02.2021 | 46.6  | 76.1   | 5.3   | 17.2   | 490                                     |
| 8      | 25.02.2021 | 50.7  | 87.3   | 5.6   | 17.7   | 380                                     |

**\*\*End of Report\*\***

Narender Singh (Chemist)  
  
 Authorized Signatory  
 (Seal & Signature)

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## Test Report

**Report Code: A20210227-005**

**Issue Date: 27.02.2021**

**Issued To:** Grain based Distillery "M/s JVS Biofuel Pvt Ltd"  
120 KLPD along with 4.0 MW power plant,  
Vill-Jatwar, Tehsil Shahzadpur, Dist. Ambala, Haryana.

**Analysis Duration:** 03.02.2021 to 27.02.2021

**Sample Description:** Ambient Air

### RESULTS

(Ambient Air Quality Analysis)

#### SAMPLING DETAILS

|                                       |  |
|---------------------------------------|--|
| <b>Sampling Location</b>              | : Vill-Dehri                                       |
| <b>Sample Collected by</b>            | : Mr. Rameshwar Kumar                              |
| <b>Sampling Protocol</b>              | : GRC/LAB/STP/AIR/01                               |
| <b>Weather Condition</b>              | : Clear Sky  |
| <b>Sampling Duration</b>              | : 24 Hours   |
| <b>Sampling Duration for CO</b>       | : 1 Hour   |
| <b>Sampler Location w.r.t. Height</b> | : 4.0 Meter above Ground Level                     |
| <b>Sample Packing &amp; Marking</b>   | : Plastic Bottle / Zip Polybag & JVSB/FEB/A001-008 |

| S. No. | Date       | Test Parameter                                |  |   |  |   |
|--------|------------|---|--|---|--|---|
|        |            | Particulate Matter (PM2.5); µg/m <sup>3</sup> | Particulate Matter (PM10); µg/m <sup>3</sup> | Sulphur Dioxide (SO <sub>2</sub> ); µg/m <sup>3</sup> | Nitrogen Dioxide (NO <sub>2</sub> ); µg/m <sup>3</sup> | Carbon Monoxide, (CO) µg/m <sup>3</sup> |
|        |            | GRC/LAB/STP/AIR/03, Gravimetric Method        | IS 5182 (Part 23):2006 (RA 2017)             | IS 5182 (Part 2):2001, (RA 2017)                      | IS 5182 (Part 6):2006 (RA 2017)                        | IS 5182 (Part 10):1999, (RA 2014)       |
| 1      | 01.02.2021 | 39.2  | 72.2   | 5.5   | 14.6   | 430                                     |
| 2      | 04.02.2021 | 41.7  | 83.2   | 5.8   | 15.4   | 410                                     |
| 3      | 08.02.2021 | 38.1  | 70.2   | 5.5   | 12.6   | 420                                     |
| 4      | 12.02.2021 | 42.7  | 82.3   | 5.9   | 16.6   | 390                                     |
| 5      | 15.02.2021 | 38.0  | 71.9   | 5.5   | 14.1   | 480                                     |
| 6      | 18.02.2021 | 39.8  | 75.5   | 5.5   | 13.5   | 450                                     |
| 7      | 22.02.2021 | 42.4  | 80.7   | 6.1   | 16.4   | 440                                     |
| 8      | 25.02.2021 | 38.2  | 73.6   | 5.5   | 12.6   | 330                                     |

Narender Singh (Chemist)  
  
 Authorized Signatory  
 (Seal & Signature)

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**\*\*End of Report\*\***



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## Test Report

**Report Code: A20210227-006**

**Issue Date: 27.02.2021**

**Issued To:** Grain based Distillery "M/s JVS Biofuel Pvt Ltd"  
120 KLPD along with 4.0 MW power plant,  
Vill-Jatwar, Tehsil Shahzadpur, Dist. Ambala, Haryana.

**Analysis Duration:** 03.02.2021 to 27.02.2021

**Sample Description:** Ambient Air

### RESULTS

(Ambient Air Quality Analysis)

#### SAMPLING DETAILS

|                                       |  |
|---------------------------------------|--|
| <b>Sampling Location</b>              | : Vill-Pilkhani                                    |
| <b>Sample Collected by</b>            | : Mr. Rameshwar Kumar                              |
| <b>Sampling Protocol</b>              | : GRC/LAB/STP/AIR/01                               |
| <b>Weather Condition</b>              | : Clear Sky  |
| <b>Sampling Duration</b>              | : 24 Hours   |
| <b>Sampling Duration for CO</b>       | : 1 Hour   |
| <b>Sampler Location w.r.t. Height</b> | : 4.0 Meter above Ground Level                     |
| <b>Sample Packing &amp; Marking</b>   | : Plastic Bottle / Zip Polybag & JVSB/FEB/A001-008 |

| S. No. | Date       | Test Parameter   |   |   |  |   |
|--------|------------|--|---|---|--|---|
|        |            | Particulate Matter (PM <sub>2.5</sub> ); µg/m <sup>3</sup> | Particulate Matter (PM <sub>10</sub> ); µg/m <sup>3</sup> | Sulphur Dioxide (SO <sub>2</sub> ); µg/m <sup>3</sup> | Nitrogen Dioxide (NO <sub>2</sub> ); µg/m <sup>3</sup> | Carbon Monoxide, (CO) µg/m <sup>3</sup> |
|        |            | GRC/LAB/STP/AIR/03, Gravimetric Method                     | IS 5182 (Part 23):2006 (RA 2017)                          | IS 5182 (Part 2) :2001, (RA 2017)                     | IS 5182 (Part 6) :2006 (RA 2017)                       | IS 5182 (Part 10) :1999, (RA 2014)      |
| 1      | 01.02.2021 | 42.2   | 87.4  | 5.8   | 18.8   | 410                                     |
| 2      | 04.02.2021 | 40.6   | 85.1  | 5.9   | 19.2   | 510                                     |
| 3      | 08.02.2021 | 39.8   | 82.8  | 6.2   | 17.4   | 500                                     |
| 4      | 12.02.2021 | 38.6   | 81.5  | 6.1   | 16.2   | 470                                     |
| 5      | 15.02.2021 | 48.7   | 83.3  | 5.5   | 15.1   | 460                                     |
| 6      | 18.02.2021 | 41.3   | 74.1  | 5.9   | 17.2   | 530                                     |
| 7      | 22.02.2021 | 39.5   | 83.2  | 5.8   | 18.1   | 520                                     |
| 8      | 25.02.2021 | 43.7   | 77.3  | 5.6   | 16.8   | 430                                     |

**\*\*End of Report\*\***

Narender Singh (Chemist)  
*N Singh*  
Authorized Signatory  
(Seal & Signature)

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## Test Report

**Report Code: A20210227-007**

**Issue Date: 27.02.2021**

**Issued To:** Grain based Distillery "M/s JVS Biofuel Pvt Ltd"  
120 KLPD along with 4.0 MW power plant,  
Vill-Jatwar, Tehsil Shahzadpur, Dist. Ambala, Haryana.

**Analysis Duration:** 03.02.2021 to 27.02.2021

**Sample Description:** Ambient Air

### RESULTS

(Ambient Air Quality Analysis)

#### SAMPLING DETAILS

|                                       |  |
|---------------------------------------|--|
| <b>Sampling Location</b>              | : Fatehgarh  |
| <b>Sample Collected by</b>            | : Mr. Rameshwar Kumar                              |
| <b>Sampling Protocol</b>              | : GRC/LAB/STP/AIR/01                               |
| <b>Weather Condition</b>              | : Clear Sky  |
| <b>Sampling Duration</b>              | : 24 Hours   |
| <b>Sampling Duration for CO</b>       | : 1 Hour   |
| <b>Sampler Location w.r.t. Height</b> | : 4.0 Meter above Ground Level                     |
| <b>Sample Packing &amp; Marking</b>   | : Plastic Bottle / Zip Polybag & JVSB/FEB/A001-008 |

| S. No. | Date       | Test Parameter   |   |   |  |   |
|--------|------------|--|---|---|--|---|
|        |            | Particulate Matter (PM <sub>2.5</sub> ); µg/m <sup>3</sup> | Particulate Matter (PM <sub>10</sub> ); µg/m <sup>3</sup> | Sulphur Dioxide (SO <sub>2</sub> ); µg/m <sup>3</sup> | Nitrogen Dioxide (NO <sub>2</sub> ); µg/m <sup>3</sup> | Carbon Monoxide, (CO) µg/m <sup>3</sup> |
|        |            | GRC/LAB/STP/AIR/03, Gravimetric Method                     | IS 5182 (Part 23):2006 (RA 2017)                          | IS 5182 (Part 2) :2001, (RA 2017)                     | IS 5182 (Part 6) :2006 (RA 2017)                       | IS 5182 (Part 10) :1999, (RA 2014)      |
| 1      | 01.02.2021 | 45.7   | 94.5  | 7.6   | 18.0   | 430                                     |
| 2      | 04.02.2021 | 40.9   | 88.9  | 6.9   | 16.4   | 480                                     |
| 3      | 08.02.2021 | 44.9   | 94.0  | 7.2   | 17.6   | 590                                     |
| 4      | 12.02.2021 | 43.0   | 89.4  | 6.8   | 15.4   | 560                                     |
| 5      | 15.02.2021 | 48.4   | 91.9  | 7.5   | 16.4   | 430                                     |
| 6      | 18.02.2021 | 40.9   | 89.2  | 6.9   | 17.1   | 520                                     |
| 7      | 22.02.2021 | 43.9   | 93.5  | 7.1   | 15.4   | 510                                     |
| 8      | 25.02.2021 | 46.5   | 97.8  | 7.2   | 17.1   | 500                                     |

**\*\*End of Report\*\***

Narender Singh (Chemist)  
  
 Authorized Signatory  
 (Seal & Signature)

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## Test Report

**Report Code: A20210227-008**

**Issue Date: 27.02.2021**

**Issued To:** Grain based Distillery "M/s JVS Biofuel Pvt Ltd"  
120 KLPD along with 4.0 MW power plant,  
Vill-Jatwar, Tehsil Shahzadpur, Dist. Ambala, Haryana.

**Analysis Duration:** 03.02.2021 to 27.02.2021

**Sample Description:** Ambient Air

### RESULTS

(Ambient Air Quality Analysis)

#### SAMPLING DETAILS

|                                       |  |
|---------------------------------------|--|
| <b>Sampling Location</b>              | : Vill-Khera Jattan                                |
| <b>Sample Collected by</b>            | : Mr. Rameshwar Kumar                              |
| <b>Sampling Protocol</b>              | : GRC/LAB/STP/AIR/01                               |
| <b>Weather Condition</b>              | : Clear Sky  |
| <b>Sampling Duration</b>              | : 24 Hours   |
| <b>Sampling Duration for CO</b>       | : 1 Hour   |
| <b>Sampler Location w.r.t. Height</b> | : 4.0 Meter above Ground Level                     |
| <b>Sample Packing &amp; Marking</b>   | : Plastic Bottle / Zip Polybag & JVSB/FEB/A001-008 |

| S. No. | Date       | Test Parameter   |   |   |  |   |
|--------|------------|--|---|---|--|---|
|        |            | Particulate Matter (PM <sub>2.5</sub> ); µg/m <sup>3</sup> | Particulate Matter (PM <sub>10</sub> ); µg/m <sup>3</sup> | Sulphur Dioxide (SO <sub>2</sub> ); µg/m <sup>3</sup> | Nitrogen Dioxide (NO <sub>2</sub> ); µg/m <sup>3</sup> | Carbon Monoxide, (CO) µg/m <sup>3</sup> |
|        |            | GRC/LAB/STP/AIR/03, Gravimetric Method                     | IS 5182 (Part 23):2006 (RA 2017)                          | IS 5182 (Part 2) :2001, (RA 2017)                     | IS 5182 (Part 6) :2006 (RA 2017)                       | IS 5182 (Part 10) :1999, (RA 2014)      |
| 1      | 01.02.2021 | 44.4   | 80.8  | 5.4   | 13.7   | 360                                     |
| 2      | 04.02.2021 | 49.7   | 86.9  | 5.7   | 15.8   | 470                                     |
| 3      | 08.02.2021 | 44.5   | 79.8  | 5.4   | 13.7   | 480                                     |
| 4      | 12.02.2021 | 46.9   | 86.7  | 5.7   | 13.6   | 350                                     |
| 5      | 15.02.2021 | 43.8   | 80.6  | 5.4   | 15.8   | 480                                     |
| 6      | 18.02.2021 | 47.5   | 88.0  | 5.8   | 13.9   | 410                                     |
| 7      | 22.02.2021 | 40.7   | 78.6  | 5.7   | 15.1   | 400                                     |
| 8      | 25.02.2021 | 45.9   | 80.0  | 5.6   | 14.3   | 340                                     |

**\*\*End of Report\*\***

Narender Singh (Chemist)  
*Narender Singh*  
Authorized Signatory  
(Seal & Signature)

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## Test Report

**Report Code: SW20210219-001 (A)**

**Issue Date: 19.02.2021**

**Issued To:** Grain based Distillery "M/s JVS Biofuel Pvt Ltd"  
120 KLPD along with 4.0 MW power plant,  
Vill-Jatwar, Tehsil Shahzadpur, Dist. Ambala, Haryana.

**Sample Received on:** 05.02.2021  
**Analysis Duration:** 05.02.2021 to 18.02.2021

**Sample Description:** Surface Water

## RESULTS

(Water Quality Analysis)

### SAMPLING DETAILS

|                                  |                                   |
|----------------------------------|-----------------------------------|
| <b>Date of Sampling</b>          | : 04.02.2021                      |
| <b>Sampling Location</b>         | : Pond near Jatwar Village        |
| <b>Sample Collected by</b>       | : Mr. Rameshwar Kumar             |
| <b>Sampling Protocol</b>         | : IS-3025(Pt-1)-1987 RA 2003      |
| <b>Weather Condition</b>         | : Clear Sky                       |
| <b>Sample Quantity</b>           | : 5 L                             |
| <b>Sample Packing &amp; Mark</b> | : Plastic Bottle & JVSB/FEB/SW-01 |

| S. No. | Parameters                                | Units    | Results | Test Method                                      |
|--------|---|----------|---------|--|
| 1.     | pH  | -        | 7.89    | IS: 3025(Pt-11)1983 (RA 2017)                    |
| 2.     | Dissolved Oxygen (DO)                     | mg/l     | 1.2     | IS: 3025(Pt-38)1989 (RA 2014)                    |
| 3.     | BOD (3Days at 27°C)                       | mg/l     | 45      | IS: 3025(Pt-44)1998 (RA 2014)                    |
| 4.     | Free Ammonia (as N)                       | mg/l     | 1.8     | IS: 3025(Pt-34)1993 (RA 2014)                    |
| 5.     | Boron                                     | mg/l     | 0.2     | 3120B, APHA 23 <sup>rd</sup> Ed., 2017 (ICP-OES) |
| 6.     | Specific Conductivity                     | µmhos/cm | 1294    | IS: 3025(Pt-14) 2013                             |
| 7.     | Temperature                               | °C       | 25.7    | IS: 3025(Pt-9)1984 (RA 2017)                     |
| 8.     | Turbidity                                 | NTU      | 110     | IS: 3025(Pt-10)-1984 (RA 2017)                   |
| 9.     | Magnesium Hardness (asCaCO <sub>3</sub> ) | mg/l     | 123     | 3500-Mg (B), APHA 23 <sup>rd</sup> Ed., 2017     |
| 10.    | Total Alkalinity (asCaCO <sub>3</sub> )   | mg/l     | 289     | IS: 3025(Pt-23)1986 (RA 2014)                    |
| 11.    | Chloride (as Cl)                          | mg/l     | 210     | IS: 3025(Pt-32)1988 (RA 2014)                    |
| 12.    | Sulphate (as SO <sub>4</sub> )            | mg/l     | 112     | IS : 3025(Pt-24)1986 (RA 2014)                   |
| 13.    | Nitrate (as NO <sub>3</sub> )             | mg/l     | 12      | IS : 3025(Pt-34)1988 (RA 2014)                   |
| 14.    | Fluoride (as F)                           | mg/l     | 0.4     | 4500F(D), APHA 23 <sup>rd</sup> Ed., 2017        |
| 15.    | Sodium (as Na)                            | mg/l     | 169     | IS: 3025(Pt-45)-1993 (RA 2014)                   |

Rahul Singh (Sr. Chemist)  
Authorized Signatory  
(Seal & Signature)

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## Test Report

Report Code: SW20210219-001 (A)

Issue Date: 19.02.2021

|     |                         |      |        |  |
|-----|-------------------------|------|--------|--|
| 16. | Potassium (as K)        | mg/l | 10.6   | IS: 3025(Pt-45)-1993 (RA 2014)                       |
| 17. | TKN (as N)              | mg/l | 3.1    | IS: 3025(Pt-34)-1988 (RA 2014)                       |
| 18. | Total Phosphorus (as P) | mg/l | 2.3    | 4500P(D), APHA 23 <sup>nd</sup> Ed., 2017            |
| 19. | COD                     | mg/l | 170    | IS : 3025(Pt-58)2006 (RA 2017)                       |
| 20. | Lead (as Pb)            | mg/l | 0.02   | 3120B, APHA 23 <sup>nd</sup> Ed., 2017 (ICP-OES)     |
| 21. | Iron (as Fe)            | mg/l | 0.29   | 3120B, APHA 23 <sup>nd</sup> Ed., 2017 (ICP-OES)     |
| 22. | Cadmium (as Cd)         | mg/l | <0.01  | 3120B, APHA 23 <sup>nd</sup> Ed., 2017 (ICP-OES)     |
| 23. | Zinc (as Zn)            | mg/l | 0.08   | 3120B, APHA 23 <sup>nd</sup> Ed., 2017 (ICP-OES)     |
| 24. | Arsenic (as As)         | mg/l | <0.01  | 3120B, APHA 23 <sup>nd</sup> Ed., 2017 (ICP-OES-VGA) |
| 25. | Mercury (as Hg)         | mg/l | <0.001 | 3120B, APHA 23 <sup>nd</sup> Ed., 2017 (ICP-OES-VGA) |
| 26. | Chromium (as Cr)        | mg/l | <0.01  | 3120B, APHA 23 <sup>nd</sup> Ed., 2017 (ICP-OES)     |
| 27. | Nickel (as Ni)          | mg/l | 0.02   | 3120B, APHA 23 <sup>nd</sup> Ed., 2017 (ICP-OES)     |
| 28. | TDS                     | mg/l | 960    | IS: 3025(Pt-16)1984, Rea( RA 2017)                   |

**\*\* End of Report \*\***

Rahul Singh (Sr. Chemist)  
Authorized Signatory  
(Seal & Signature)

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## Test Report

**Report Code: SW20210219-001 (B)**

**Issue Date: 19.02.2021**

**Issued To:** Grain based Distillery "M/s JVS Biofuel Pvt Ltd"  
120 KLPD along with 4.0 MW power plant,  
Vill-Jatwar, Tehsil Shahzadpur, Dist. Ambala, Haryana.

**Sample Received on:** 05.02.2021  
**Analysis Duration:** 05.02.2021 to 11.02.2021

**Sample Description:** Surface Water

## RESULTS

(Water Quality Analysis)

### SAMPLING DETAILS

|                                  |                                 |
|----------------------------------|---------------------------------|
| <b>Date of Sampling</b>          | : 04.02.2021                    |
| <b>Sampling Location</b>         | : Pond near Jatwar Village      |
| <b>Sample Collected by</b>       | : Mr. Rameshwar Kumar           |
| <b>Sampling Protocol</b>         | : IS-1622-1981(Reaff.:2003)     |
| <b>Weather Condition</b>         | : Clear Sky                     |
| <b>Sample Quantity</b>           | : 500 ml                        |
| <b>Sample Packing &amp; Mark</b> | : Glass Bottle & JVSB/FEB/SW-01 |

| S. No. | Parameters      | Units     | Results           | Test Method               |
|--------|-----------------|-----------|-------------------|---------------------------|
| 1.     | Total Coliform  | MPN/100ml | $9.0 \times 10^6$ | IS 1622-1981 (Reaff.2003) |
| 2.     | Faecal Coliform | MPN/100ml | $2.9 \times 10^5$ | IS 1622-1981 (Reaff.2003) |

**\*\* End of Report \*\***

Ajay Kumar Sharma (Quality Manager)  
  
Authorised Signatory  
(Seal & Signature)

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## Test Report

**Report Code: SW20210219-001 (A)**

**Issue Date: 19.02.2021**

**Issued To:** Grain based Distillery "M/s JVS Biofuel Pvt Ltd"  
120 KLPD along with 4.0 MW power plant,  
Vill-Jatwar, Tehsil Shahzadpur, Dist. Ambala, Haryana.

**Sample Received on:** 05.02.2021  
**Analysis Duration:** 05.02.2021 to 18.02.2021

**Sample Description:** Surface Water

## RESULTS

(Water Quality Analysis)

### SAMPLING DETAILS

**Date of Sampling** : 04.02.2021  
**Sampling Location** : Pond near Jatwar Village  
**Sample Collected by** : Mr. Rameshwar Kumar  
**Sampling Protocol** : IS-3025(Pt-1)-1987 RA 2003  
**Weather Condition** : Clear Sky  
**Sample Quantity** : 5 L  
**Sample Packing & Mark** : Plastic Bottle & JVS/B/FEB/SW-01

**\*\* End of Report \*\***

| S. No. | Parameters  | Units | Results | Test Method                             |
|--------|---|-------|---------|---|
| 1.     | Sodium Adsorption Ratio *                                 | -     | 5.19    | IS : 11624 1986 (RA 2015)               |
| 2.     | Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH)* | mg/l  | <0.01   | 5530-C, APHA 23 <sup>nd</sup> Ed., 2017 |

Rahul Singh (Sr. Chemist)  
Authorized Signatory  
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## Test Report

**Report Code: SW20210219-002 (A)**

**Issue Date: 19.02.2021**

**Issued To:** Grain based Distillery "M/s JVS Biofuel Pvt Ltd"  
120 KLPD along with 4.0 MW power plant,  
Vill-Jatwar, Tehsil Shahzadpur, Dist. Ambala, Haryana.

**Sample Received on:** 05.02.2021  
**Analysis Duration:** 05.02.2021 to 18.02.2021

**Sample Description:** Surface Water

## RESULTS

(Water Quality Analysis)

### SAMPLING DETAILS

|                                  |                                   |
|----------------------------------|-----------------------------------|
| <b>Date of Sampling</b>          | : 04.02.2021                      |
| <b>Sampling Location</b>         | : Pond near Bharog Village        |
| <b>Sample Collected by</b>       | : Mr. Rameshwar Kumar             |
| <b>Sampling Protocol</b>         | : IS-3025(Pt-1)-1987 RA 2003      |
| <b>Weather Condition</b>         | : Clear Sky                       |
| <b>Sample Quantity</b>           | : 5 L                             |
| <b>Sample Packing &amp; Mark</b> | : Plastic Bottle & JVSB/FEB/SW-02 |

| S. No. | Parameters                                | Units    | Results | Test Method                                      |
|--------|---|----------|---------|--|
| 1.     | pH  | -        | 7.85    | IS: 3025(Pt-11)1983 (RA 2017)                    |
| 2.     | Dissolved Oxygen (DO)                     | mg/l     | 1.1     | IS: 3025(Pt-38)1989 (RA 2014)                    |
| 3.     | BOD (3Days at 27°C)                       | mg/l     | 44      | IS: 3025(Pt-44)1998 (RA 2014)                    |
| 4.     | Free Ammonia (as N)                       | mg/l     | 2.1     | IS: 3025(Pt-34)1993 (RA 2014)                    |
| 5.     | Boron                                     | mg/l     | 0.4     | 3120B, APHA 23 <sup>rd</sup> Ed., 2017 (ICP-OES) |
| 6.     | Specific Conductivity                     | µmhos/cm | 1294    | IS: 3025(Pt-14) 2013                             |
| 7.     | Temperature                               | °C       | 26.3    | IS: 3025(Pt-9)1984 (RA 2017)                     |
| 8.     | Turbidity                                 | NTU      | 96      | IS: 3025(Pt-10)-1984 (RA 2017)                   |
| 9.     | Magnesium Hardness (asCaCO <sub>3</sub> ) | mg/l     | 148     | 3500-Mg (B), APHA 23 <sup>rd</sup> Ed., 2017     |
| 10.    | Total Alkalinity (asCaCO <sub>3</sub> )   | mg/l     | 276     | IS: 3025(Pt-23)1986 (RA 2014)                    |
| 11.    | Chloride (as Cl)                          | mg/l     | 243     | IS: 3025(Pt-32)1988 (RA 2014)                    |
| 12.    | Sulphate (as SO <sub>4</sub> )            | mg/l     | 127     | IS : 3025(Pt-24)1986 (RA 2014)                   |
| 13.    | Nitrate (as NO <sub>3</sub> )             | mg/l     | 12      | IS : 3025(Pt-34)1988 (RA 2014)                   |
| 14.    | Fluoride (as F)                           | mg/l     | 0.4     | 4500F(D), APHA 23 <sup>rd</sup> Ed., 2017        |
| 15.    | Sodium (as Na)                            | mg/l     | 161     | IS: 3025(Pt-45)-1993 (RA 2014)                   |

Rahul Singh (Sr. Chemist)  
Authorized Signatory  
(Seal & Signature)

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## Test Report

Report Code: SW20210219-002 (A)

Issue Date: 19.02.2021

|     |                         |      |        |  |
|-----|-------------------------|------|--------|--|
| 16. | Potassium (as K)        | mg/l | 11.7   | IS: 3025(Pt-45)-1993 (RA 2014)                       |
| 17. | TKN (as N)              | mg/l | 4.5    | IS: 3025(Pt-34)-1988 (RA 2014)                       |
| 18. | Total Phosphorus (as P) | mg/l | 2.4    | 4500P(D), APHA 23 <sup>nd</sup> Ed., 2017            |
| 19. | COD                     | mg/l | 210    | IS : 3025(Pt-58)2006 (RA 2017)                       |
| 20. | Lead (as Pb)            | mg/l | 0.02   | 3120B, APHA 23 <sup>nd</sup> Ed., 2017 (ICP-OES)     |
| 21. | Iron (as Fe)            | mg/l | 0.44   | 3120B, APHA 23 <sup>nd</sup> Ed., 2017 (ICP-OES)     |
| 22. | Cadmium (as Cd)         | mg/l | <0.01  | 3120B, APHA 23 <sup>nd</sup> Ed., 2017 (ICP-OES)     |
| 23. | Zinc (as Zn)            | mg/l | 0.08   | 3120B, APHA 23 <sup>nd</sup> Ed., 2017 (ICP-OES)     |
| 24. | Arsenic (as As)         | mg/l | <0.01  | 3120B, APHA 23 <sup>nd</sup> Ed., 2017 (ICP-OES-VGA) |
| 25. | Mercury (as Hg)         | mg/l | <0.001 | 3120B, APHA 23 <sup>nd</sup> Ed., 2017 (ICP-OES-VGA) |
| 26. | Chromium (as Cr)        | mg/l | <0.01  | 3120B, APHA 23 <sup>nd</sup> Ed., 2017 (ICP-OES)     |
| 27. | Nickel (as Ni)          | mg/l | 0.02   | 3120B, APHA 23 <sup>nd</sup> Ed., 2017 (ICP-OES)     |
| 28. | TDS                     | mg/l | 1026   | IS: 3025(Pt-16)1984, Rea( RA 2017)                   |

**\*\* End of Report \*\***

Rahul Singh (Sr. Chemist)  
Authorized Signatory  
(Seal & Signature)

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## Test Report

**Report Code: SW20210219-002 (B)**

**Issue Date: 19.02.2021**

**Issued To:** Grain based Distillery "M/s JVS Biofuel Pvt Ltd"  
120 KLPD along with 4.0 MW power plant,  
Vill-Jatwar, Tehsil Shahzadpur, Dist. Ambala, Haryana.

**Sample Received on:** 05.02.2021  
**Analysis Duration:** 05.02.2021 to 11.02.2021

**Sample Description:** Surface Water

## RESULTS

(Water Quality Analysis)

### SAMPLING DETAILS

|                                  |                                 |
|----------------------------------|---------------------------------|
| <b>Date of Sampling</b>          | : 04.02.2021                    |
| <b>Sampling Location</b>         | : Pond near Bharog Village      |
| <b>Sample Collected by</b>       | : Mr. Rameshwar Kumar           |
| <b>Sampling Protocol</b>         | : IS-1622-1981(Reaff.:2003)     |
| <b>Weather Condition</b>         | : Clear Sky                     |
| <b>Sample Quantity</b>           | : 500 ml                        |
| <b>Sample Packing &amp; Mark</b> | : Glass Bottle & JVSB/FEB/SW-02 |

| S. No. | Parameters      | Units     | Results           | Test Method               |
|--------|-----------------|-----------|-------------------|---------------------------|
| 1.     | Total Coliform  | MPN/100ml | $8.6 \times 10^5$ | IS 1622-1981 (Reaff.2003) |
| 2.     | Faecal Coliform | MPN/100ml | $4.2 \times 10^4$ | IS 1622-1981 (Reaff.2003) |

**\*\* End of Report \*\***

Ajay Kumar Sharma (Quality Manager)  
  
Authorised Signatory  
(Seal & Signature)

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## Test Report

**Report Code: SW20210219-002 (A)**

**Issue Date: 19.02.2021**

**Issued To:** Grain based Distillery "M/s JVS Biofuel Pvt Ltd"  
120 KLPD along with 4.0 MW power plant,  
Vill-Jatwar, Tehsil Shahzadpur, Dist. Ambala, Haryana.

**Sample Received on:** 05.02.2021  
**Analysis Duration:** 05.02.2021 to 18.02.2021

**Sample Description:** Surface Water

## RESULTS

(Water Quality Analysis)

### SAMPLING DETAILS

**Date of Sampling** : 04.02.2021  
**Sampling Location** : Pond near Bharog Village  
**Sample Collected by** : Mr. Rameshwar Kumar  
**Sampling Protocol** : IS-3025(Pt-1)-1987 RA 2003  
**Weather Condition** : Clear Sky  
**Sample Quantity** : 5 L  
**Sample Packing & Mark** : Plastic Bottle & JVS/B/FEB/SW-02

**\*\* End of Report \*\***

| S. No. | Parameters  | Units | Results | Test Method                             |
|--------|---|-------|---------|---|
| 1.     | Sodium Adsorption Ratio *                                 | -     | 5.13    | IS : 11624 1986 (RA 2015)               |
| 2.     | Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH)* | mg/l  | <0.01   | 5530-C, APHA 23 <sup>nd</sup> Ed., 2017 |

Rahul Singh (Sr. Chemist)  
Authorized Signatory  
(Seal & Signature)

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## Test Report

**Report Code: SW20210219-003 (A)**

**Issue Date: 19.02.2021**

**Issued To:** Grain based Distillery "M/s JVS Biofuel Pvt Ltd"  
120 KLPD along with 4.0 MW power plant,  
Vill-Jatwar, Tehsil Shahzadpur, Dist. Ambala, Haryana.

**Sample Received on:** 05.02.2021  
**Analysis Duration:** 05.02.2021 to 18.02.2021

**Sample Description:** Surface Water

## RESULTS

(Water Quality Analysis)

### SAMPLING DETAILS

|                                  |                                   |
|----------------------------------|-----------------------------------|
| <b>Date of Sampling</b>          | : 04.02.2021                      |
| <b>Sampling Location</b>         | : Pond near Bteple Village        |
| <b>Sample Collected by</b>       | : Mr. Rameshwar Kumar             |
| <b>Sampling Protocol</b>         | : IS-3025(Pt-1)-1987 RA 2003      |
| <b>Weather Condition</b>         | : Clear Sky                       |
| <b>Sample Quantity</b>           | : 5 L                             |
| <b>Sample Packing &amp; Mark</b> | : Plastic Bottle & JVSB/FEB/SW-03 |

| S. No. | Parameters                                | Units    | Results | Test Method                                      |
|--------|---|----------|---------|--|
| 1.     | pH  | -        | 7.95    | IS: 3025(Pt-11)1983 (RA 2017)                    |
| 2.     | Dissolved Oxygen (DO)                     | mg/l     | 1.3     | IS: 3025(Pt-38)1989 (RA 2014)                    |
| 3.     | BOD (3Days at 27°C)                       | mg/l     | 48      | IS: 3025(Pt-44)1998 (RA 2014)                    |
| 4.     | Free Ammonia (as N)                       | mg/l     | 1.9     | IS: 3025(Pt-34)1993 (RA 2014)                    |
| 5.     | Boron                                     | mg/l     | 0.3     | 3120B, APHA 23 <sup>rd</sup> Ed., 2017 (ICP-OES) |
| 6.     | Specific Conductivity                     | µmhos/cm | 1294    | IS: 3025(Pt-14) 2013                             |
| 7.     | Temperature                               | °C       | 26      | IS: 3025(Pt-9)1984 (RA 2017)                     |
| 8.     | Turbidity                                 | NTU      | 84      | IS: 3025(Pt-10)-1984 (RA 2017)                   |
| 9.     | Magnesium Hardness (asCaCO <sub>3</sub> ) | mg/l     | 163     | 3500-Mg (B), APHA 23 <sup>rd</sup> Ed., 2017     |
| 10.    | Total Alkalinity (asCaCO <sub>3</sub> )   | mg/l     | 293     | IS: 3025(Pt-23)1986 (RA 2014)                    |
| 11.    | Chloride (as Cl)                          | mg/l     | 256     | IS: 3025(Pt-32)1988 (RA 2014)                    |
| 12.    | Sulphate (as SO <sub>4</sub> )            | mg/l     | 123     | IS : 3025(Pt-24)1986 (RA 2014)                   |
| 13.    | Nitrate (as NO <sub>3</sub> )             | mg/l     | 12      | IS : 3025(Pt-34)1988 (RA 2014)                   |
| 14.    | Fluoride (as F)                           | mg/l     | 0.4     | 4500F(D), APHA 23 <sup>rd</sup> Ed., 2017        |
| 15.    | Sodium (as Na)                            | mg/l     | 157     | IS: 3025(Pt-45)-1993 (RA 2014)                   |

Rahul Singh (Sr. Chemist)  
Authorized Signatory  
(Seal & Signature)

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## Test Report

Report Code: SW20210219-003 (A)

Issue Date: 19.02.2021

|     |                         |      |        |  |
|-----|-------------------------|------|--------|--|
| 16. | Potassium (as K)        | mg/l | 9.8    | IS: 3025(Pt-45)-1993 (RA 2014)                       |
| 17. | TKN (as N)              | mg/l | 5.6    | IS: 3025(Pt-34)-1988 (RA 2014)                       |
| 18. | Total Phosphorus (as P) | mg/l | 3.1    | 4500P(D), APHA 23 <sup>nd</sup> Ed., 2017            |
| 19. | COD                     | mg/l | 190    | IS : 3025(Pt-58)2006 (RA 2017)                       |
| 20. | Lead (as Pb)            | mg/l | 0.02   | 3120B, APHA 23 <sup>nd</sup> Ed., 2017 (ICP-OES)     |
| 21. | Iron (as Fe)            | mg/l | 0.39   | 3120B, APHA 23 <sup>nd</sup> Ed., 2017 (ICP-OES)     |
| 22. | Cadmium (as Cd)         | mg/l | 0.01   | 3120B, APHA 23 <sup>nd</sup> Ed., 2017 (ICP-OES)     |
| 23. | Zinc (as Zn)            | mg/l | 0.08   | 3120B, APHA 23 <sup>nd</sup> Ed., 2017 (ICP-OES)     |
| 24. | Arsenic (as As)         | mg/l | <0.01  | 3120B, APHA 23 <sup>nd</sup> Ed., 2017 (ICP-OES-VGA) |
| 25. | Mercury (as Hg)         | mg/l | <0.001 | 3120B, APHA 23 <sup>nd</sup> Ed., 2017 (ICP-OES-VGA) |
| 26. | Chromium (as Cr)        | mg/l | <0.01  | 3120B, APHA 23 <sup>nd</sup> Ed., 2017 (ICP-OES)     |
| 27. | Nickel (as Ni)          | mg/l | 0.02   | 3120B, APHA 23 <sup>nd</sup> Ed., 2017 (ICP-OES)     |
| 28. | TDS                     | mg/l | 1075   | IS: 3025(Pt-16)1984, Rea( RA 2017)                   |

**\*\* End of Report \*\***

Rahul Singh (Sr. Chemist)  
Authorized Signatory  
(Seal & Signature)

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## Test Report

**Report Code: SW20210219-003 (B)**

**Issue Date: 19.02.2021**

**Issued To:** Grain based Distillery "M/s JVS Biofuel Pvt Ltd"  
120 KLPD along with 4.0 MW power plant,  
Vill-Jatwar, Tehsil Shahzadpur, Dist. Ambala, Haryana.

**Sample Received on:** 05.02.2021  
**Analysis Duration:** 05.02.2021 to 11.02.2021

**Sample Description:** Surface Water

## RESULTS

(Water Quality Analysis)

### SAMPLING DETAILS

|                                  |                                 |
|----------------------------------|---------------------------------|
| <b>Date of Sampling</b>          | : 04.02.2021                    |
| <b>Sampling Location</b>         | : Pond near Bteple Village      |
| <b>Sample Collected by</b>       | : Mr. Rameshwar Kumar           |
| <b>Sampling Protocol</b>         | : IS-1622-1981(Reaff.:2003)     |
| <b>Weather Condition</b>         | : Clear Sky                     |
| <b>Sample Quantity</b>           | : 500 ml                        |
| <b>Sample Packing &amp; Mark</b> | : Glass Bottle & JVSB/FEB/SW-03 |

| S. No. | Parameters      | Units     | Results           | Test Method               |
|--------|-----------------|-----------|-------------------|---------------------------|
| 1.     | Total Coliform  | MPN/100ml | $6.2 \times 10^5$ | IS 1622-1981 (Reaff.2003) |
| 2.     | Faecal Coliform | MPN/100ml | $2.6 \times 10^4$ | IS 1622-1981 (Reaff.2003) |

**\*\* End of Report \*\***

Ajay Kumar Sharma (Quality Manager)  
  
Authorised Signatory  
(Seal & Signature)

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## Test Report

**Report Code: SW20210219-003 (A)**

**Issue Date: 19.02.2021**

**Issued To:** Grain based Distillery "M/s JVS Biofuel Pvt Ltd"  
120 KLPD along with 4.0 MW power plant,  
Vill-Jatwar, Tehsil Shahzadpur, Dist. Ambala, Haryana.

**Sample Received on:** 05.02.2021  
**Analysis Duration:** 05.02.2021 to 18.02.2021

**Sample Description:** Surface Water

## RESULTS

(Water Quality Analysis)

### SAMPLING DETAILS

**Date of Sampling** : 04.02.2021  
**Sampling Location** : Pond near Bteple Village  
**Sample Collected by** : Mr. Rameshwar Kumar  
**Sampling Protocol** : IS-3025(Pt-1)-1987 RA 2003  
**Weather Condition** : Clear Sky  
**Sample Quantity** : 5 L  
**Sample Packing & Mark** : Plastic Bottle & JVS/B/FEB/SW-03

**\*\* End of Report \*\***

| S. No. | Parameters  | Units | Results | Test Method                             |
|--------|---|-------|---------|---|
| 1.     | Sodium Adsorption Ratio *                                 | -     | 5.18    | IS : 11624 1986 (RA 2015)               |
| 2.     | Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH)* | mg/l  | <0.01   | 5530-C, APHA 23 <sup>nd</sup> Ed., 2017 |

Rahul Singh (Sr. Chemist)  
Authorized Signatory  
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## Test Report

**Report Code: S20210219-004(A)**

**Issued To:** Grain based Distillery "M/s JVS Biofuel Pvt Ltd"

120 KLPD along with 4.0 MW power plant,

Vill-Jatwar, Tehsil Shahzadpur, Dist. Ambala, Haryana.

**Sample Description:** Soil Sample

**Issue Date: 19.02.2021**

**Sample Received on:** 05.02.2021

**Analysis Duration:** 05.02.2021 to 18.02.2021

## RESULTS (Soil Quality Analysis)

### SAMPLING DETAILS

|                                     |                                |
|-------------------------------------|--------------------------------|
| <b>Date of Sampling</b>             | : 04.02.2021                   |
| <b>Sampling Location</b>            | : Village Jatwar               |
| <b>Sample Collected by</b>          | : Mr. Rameshwar Kumar          |
| <b>Sampling Protocol</b>            | : GRC/LAB/STP/SOIL/01          |
| <b>Weather Condition</b>            | : Clear Sky                    |
| <b>Sample Quantity</b>              | : 5 kg                         |
| <b>Sample Packing &amp; Marking</b> | : Zip Polybag; JVS/B/FEB/SQ-04 |

| S. No. | Parameters                    | Units    | Results | Test Method   |
|--------|-------------------------------|----------|---------|---|
| 1      | pH (1:2 Suspension)           | -        | 7.89    | IS 2720 (Part-26): 1987 (RA 2016)   |
| 2      | Electrical Conductivity (1:2) | µmhos/cm | 191     | IS 14767: 2000 (RA 2016)  |
| 3      | Available Potassium as K      | mg/kg    | 77.6    | GRC/LAB/STP/SOIL/04 dt: 2018  |
| 4      | Exchangeable Sodium as Na     | mg/kg    | 89      | GRC/LAB/STP/SOIL/03 dt: 2018  |
| 5      | Exchangeable Calcium as Ca    | mg/kg    | 1623    | GRC/LAB/STP/SOIL/05 dt: 2018  |
| 6      | Exchangeable Magnesium as Mg  | mg/kg    | 218     | GRC/LAB/STP/SOIL/06 dt: 2018  |
| 7      | Total Phosphorus as P         | mg/kg    | 3.4     | GRC/LAB/STP/SOIL/09 dt: 2018  |
| 8      | Organic Matter                | %        | 0.40    | GRC/LAB/STP/SOIL/08 dt: 2018  |
| 9      | Total Nitrogen as N           | mg/kg    | 56      | IS 2720 (Part-22): 1972 (RA 2015)   |
| 10     | Total Zinc as Zn              | mg/kg    | 17.8    | 3050-B, PP 1-12, USEPA 2nd Revision, Dec.1996/ 3120-B, APHA 23rd Ed. 2017 |
| 11     | Total Lead as Pb              | mg/kg    | 3.8     | 3050-B, PP 1-12, USEPA 2nd Revision, Dec.1996/ 3120-B, APHA 23rd Ed. 2017 |
| 12     | Total Copper as Cu            | mg/kg    | 2.1     | 3050-B, PP 1-12, USEPA 2nd Revision, Dec.1996/ 3120-B, APHA 23rd Ed. 2017 |
| 13     | Manganese as Mn               | mg/kg    | 178.5   | 3050-B, PP 1-12, USEPA 2nd Revision, Dec.1996/ 3120-B, APHA 23rd Ed. 2017 |
| 14     | Total Cadmium as Cd           | mg/kg    | 4.2     | 3050-B, PP 1-12, USEPA 2nd Revision, Dec.1996/ 3120-B, APHA 23rd Ed. 2017 |

**\*\*End of Report\*\***



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## Test Report

**Report Code: S20210219-004(B)**

**Issued To:** Grain based Distillery "M/s JVS Biofuel Pvt Ltd"  
120 KLPD along with 4.0 MW power plant,  
Vill-Jatwar, Tehsil Shahzadpur, Dist. Ambala, Haryana.

**Sample Description:** Soil Sample

**Issue Date: 19.02.2021**

**Sample Received on:** 05.02.2021

**Analysis Duration:** 05.02.2021 to 18.02.2021

## RESULTS (Soil Quality Analysis)

### SAMPLING DETAILS

|                                     |                                |
|-------------------------------------|--------------------------------|
| <b>Date of Sampling</b>             | : 04.02.2021                   |
| <b>Sampling Location</b>            | : Village Jatwar               |
| <b>Sample Collected by</b>          | : Mr. Rameshwar Kumar          |
| <b>Sampling Protocol</b>            | : GRC/LAB/STP/SOIL/01          |
| <b>Weather Condition</b>            | : Clear Sky                    |
| <b>Sample Quantity</b>              | : 5 kg                         |
| <b>Sample Packing &amp; Marking</b> | : Zip Polybag; JVS/B/FEB/SQ-04 |

| S. No. | Parameters               | Units      | Results    | Test Method  |
|--------|--------------------------|------------|------------|--|
| 1      | Texture                  | -          | Sandy Loam | GRC/LAB/STP/SOIL/02 dt: 2018                           |
|        | Sand                     | %          | 75.2       |  |
|        | Silt                     | %          | 11.7       |  |
|        | Clay                     | %          | 13.1       |  |
| 2      | Cation Exchange Capacity | meq/100 gm | 10.5       | IS 2720 (Part-24): 1976 (RA 2015)                      |
| 3      | Sodium Absorption Ratio  | -          | 0.55       | GRC/LAB/STP/SOIL/10 dt: 2018                           |
| 4      | Water Holding Capacity   | %          | 23.5       | GRC/LAB/STP/SOIL/11 dt: 2018                           |
| 5      | Porosity                 | %          | 42.3       | GRC/LAB/STP/SOIL/12 dt: 2018                           |
| 6      | Permeability             | cm/hrs     | 2.3        | IS 2720 (Part-17): 1986 (RA 2016)                      |
| 7      | Bulk Density             | gm/cc      | 1.33       | SOP No. GRC-LAB/STP-SOIL/13; Issue No.: 01; Issue date |

**\*\*End of Report\*\***



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## Test Report

**Report Code: S20210219-003(A)**

**Issued To:** Grain based Distillery "M/s JVS Biofuel Pvt Ltd"

120 KLPD along with 4.0 MW power plant,

Vill-Jatwar, Tehsil Shahzadpur, Dist. Ambala, Haryana.

**Sample Description:** Soil Sample

**Issue Date: 19.02.2021**

**Sample Received on:** 05.02.2021

**Analysis Duration:** 05.02.2021 to 18.02.2021

## RESULTS

(Soil Quality Analysis)

### SAMPLING DETAILS

|                                     |                                |
|-------------------------------------|--------------------------------|
| <b>Date of Sampling</b>             | : 04.02.2021                   |
| <b>Sampling Location</b>            | : Village Budha Khera          |
| <b>Sample Collected by</b>          | : Mr. Rameshwar Kumar          |
| <b>Sampling Protocol</b>            | : GRC/LAB/STP/SOIL/01          |
| <b>Weather Condition</b>            | : Clear Sky                    |
| <b>Sample Quantity</b>              | : 5 kg                         |
| <b>Sample Packing &amp; Marking</b> | : Zip Polybag; JVS/B/FEB/SQ-03 |

| S. No. | Parameters                    | Units    | Results | Test Method   |
|--------|-------------------------------|----------|---------|---|
| 1      | pH (1:2 Suspension)           | -        | 7.85    | IS 2720 (Part-26): 1987 (RA 2016)   |
| 2      | Electrical Conductivity (1:2) | µmhos/cm | 186     | IS 14767: 2000 (RA 2016)  |
| 3      | Available Potassium as K      | mg/kg    | 78.6    | GRC/LAB/STP/SOIL/04 dt: 2018  |
| 4      | Exchangeable Sodium as Na     | mg/kg    | 83      | GRC/LAB/STP/SOIL/03 dt: 2018  |
| 5      | Exchangeable Calcium as Ca    | mg/kg    | 1752    | GRC/LAB/STP/SOIL/05 dt: 2018  |
| 6      | Exchangeable Magnesium as Mg  | mg/kg    | 216     | GRC/LAB/STP/SOIL/06 dt: 2018  |
| 7      | Total Phosphorus as P         | mg/kg    | 3.2     | GRC/LAB/STP/SOIL/09 dt: 2018  |
| 8      | Organic Matter                | %        | 0.38    | GRC/LAB/STP/SOIL/08 dt: 2018  |
| 9      | Total Nitrogen as N           | mg/kg    | 48      | IS 2720 (Part-22): 1972 (RA 2015)   |
| 10     | Total Zinc as Zn              | mg/kg    | 16.4    | 3050-B, PP 1-12, USEPA 2nd Revision, Dec.1996/ 3120-B, APHA 23rd Ed. 2017 |
| 11     | Total Lead as Pb              | mg/kg    | 4.1     | 3050-B, PP 1-12, USEPA 2nd Revision, Dec.1996/ 3120-B, APHA 23rd Ed. 2017 |
| 12     | Total Copper as Cu            | mg/kg    | 2.7     | 3050-B, PP 1-12, USEPA 2nd Revision, Dec.1996/ 3120-B, APHA 23rd Ed. 2017 |
| 13     | Manganese as Mn               | mg/kg    | 180     | 3050-B, PP 1-12, USEPA 2nd Revision, Dec.1996/ 3120-B, APHA 23rd Ed. 2017 |
| 14     | Total Cadmium as Cd           | mg/kg    | 4.3     | 3050-B, PP 1-12, USEPA 2nd Revision, Dec.1996/ 3120-B, APHA 23rd Ed. 2017 |

**\*\*End of Report\*\***



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Head Office: F-375, Sector-63, Noida, Gautam Budh Nagar, U.P – 201 301

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Website: <https://www.grc-india.com>, E-mail : [lab@grc-india.com](mailto:lab@grc-india.com); [info@grc-india.com](mailto:info@grc-india.com)

## Test Report

**Report Code: S20210219-003(B)**

**Issued To:** Grain based Distillery "M/s JVS Biofuel Pvt Ltd"  
120 KLPD along with 4.0 MW power plant,  
Vill-Jatwar, Tehsil Shahzadpur, Dist. Ambala, Haryana.

**Sample Description:** Soil Sample

**Issue Date: 19.02.2021**

**Sample Received on:** 05.02.2021

**Analysis Duration:** 05.02.2021 to 18.02.2021

## RESULTS (Soil Quality Analysis)

### SAMPLING DETAILS

|                                     |                                |
|-------------------------------------|--------------------------------|
| <b>Date of Sampling</b>             | : 04.02.2021                   |
| <b>Sampling Location</b>            | : Budha Khera Village          |
| <b>Sample Collected by</b>          | : Mr. Rameshwar Kumar          |
| <b>Sampling Protocol</b>            | : GRC/LAB/STP/SOIL/01          |
| <b>Weather Condition</b>            | : Clear Sky                    |
| <b>Sample Quantity</b>              | : 5 kg                         |
| <b>Sample Packing &amp; Marking</b> | : Zip Polybag; JVS/B/FEB/SQ-03 |

| S. No. | Parameters               | Units      | Results    | Test Method  |
|--------|--------------------------|------------|------------|--|
| 1      | Texture                  | -          | Sandy Loam | GRC/LAB/STP/SOIL/02<br>dt: 2018  |
|        | Sand                     | %          | 74.5       |  |
|        | Silt                     | %          | 16.9       |  |
|        | Clay                     | %          | 12.7       |  |
| 2      | Cation exchange capacity | meq/100 gm | 11.1       | IS 2720 (Part-24): 1976<br>(RA 2015)                                     |
| 3      | Sodium Absorption Ratio  | -          | 0.5        | GRC/LAB/STP/SOIL/10<br>dt: 2018  |
| 4      | Water Holding Capacity   | %          | 23.6       | GRC/LAB/STP/SOIL/11<br>dt: 2018  |
| 5      | Porosity                 | %          | 42.7       | GRC/LAB/STP/SOIL/12<br>dt: 2018  |
| 6      | Permeability             | cm/hrs     | 2.4        | IS 2720 (Part-17): 1986<br>(RA 2016)                                     |
| 7      | Bulk Density             | gm/cc      | 1.31       | SOP No. GRC-LAB/STP-<br>SOIL/13; Issue No.: 01;<br>Issue date 06.01.2020 |

**\*\*End of Report\*\***



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Website: <https://www.grc-india.com>, E-mail : [lab@grc-india.com](mailto:lab@grc-india.com); [info@grc-india.com](mailto:info@grc-india.com)

## Test Report

**Report Code: S20210219-002(A)**

**Issued To:** Grain based Distillery "M/s JVS Biofuel Pvt Ltd"

120 KLPD along with 4.0 MW power plant,

Vill-Jatwar, Tehsil Shahzadpur, Dist. Ambala, Haryana.

**Sample Description:** Soil Sample

**Issue Date: 19.02.2021**

**Sample Received on:** 05.02.2021

**Analysis Duration:** 05.02.2021 to 18.02.2021

## RESULTS (Soil Quality Analysis)

### SAMPLING DETAILS

|                                     |                                |
|-------------------------------------|--------------------------------|
| <b>Date of Sampling</b>             | : 04.02.2021                   |
| <b>Sampling Location</b>            | : Village Singhpur             |
| <b>Sample Collected by</b>          | : Mr. Rameshwar Kumar          |
| <b>Sampling Protocol</b>            | : GRC/LAB/STP/SOIL/01          |
| <b>Weather Condition</b>            | : Clear Sky                    |
| <b>Sample Quantity</b>              | : 5 kg                         |
| <b>Sample Packing &amp; Marking</b> | : Zip Polybag; JVS/B/FEB/SQ-02 |

| S. No. | Parameters                    | Units   | Results | Test Method   |
|--------|-------------------------------|---------|---------|---|
| 1      | pH (1:2 Suspension)           | -       | 7.81    | IS 2720 (Part-26): 1987 (RA 2016)   |
| 2      | Electrical Conductivity (1:2) | µmhos/c | 167     | IS 14767: 2000 (RA 2016)  |
| 3      | Available Potassium as K      | mg/kg   | 85.3    | GRC/LAB/STP/SOIL/04 dt: 2018  |
| 4      | Exchangeable Sodium as Na     | mg/kg   | 79      | GRC/LAB/STP/SOIL/03 dt: 2018  |
| 5      | Exchangeable Calcium as Ca    | mg/kg   | 1658    | GRC/LAB/STP/SOIL/05 dt: 2018  |
| 6      | Exchangeable Magnesium as Mg  | mg/kg   | 236     | GRC/LAB/STP/SOIL/06 dt: 2018  |
| 7      | Total Phosphorus as P         | mg/kg   | 2.7     | GRC/LAB/STP/SOIL/09 dt: 2018  |
| 8      | Organic Matter                | %       | 0.41    | GRC/LAB/STP/SOIL/08 dt: 2018  |
| 9      | Total Nitrogen as N           | mg/kg   | 51      | IS 2720 (Part-22): 1972 (RA 2015)   |
| 10     | Total Zinc as Zn              | mg/kg   | 16.1    | 3050-B, PP 1-12, USEPA 2nd Revision, Dec.1996/ 3120-B, APHA 23rd Ed. 2017 |
| 11     | Total Lead as Pb              | mg/kg   | 3.7     | 3050-B, PP 1-12, USEPA 2nd Revision, Dec.1996/ 3120-B, APHA 23rd Ed. 2017 |
| 12     | Total Copper as Cu            | mg/kg   | 2.8     | 3050-B, PP 1-12, USEPA 2nd Revision, Dec.1996/ 3120-B, APHA 23rd Ed. 2017 |
| 13     | Manganese as Mn               | mg/kg   | 175     | 3050-B, PP 1-12, USEPA 2nd Revision, Dec.1996/ 3120-B, APHA 23rd Ed. 2017 |
| 14     | Total Cadmium as Cd           | mg/kg   | 4.9     | 3050-B, PP 1-12, USEPA 2nd Revision, Dec.1996/ 3120-B, APHA 23rd Ed. 2017 |

**\*\*End of Report\*\***



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## Test Report

**Report Code: S20210219-002(B)**

**Issued To:** Grain based Distillery "M/s JVS Biofuel Pvt Ltd"  
120 KLPD along with 4.0 MW power plant,  
Vill-Jatwar, Tehsil Shahzadpur, Dist. Ambala, Haryana.

**Sample Description:** Soil Sample

**Issue Date: 19.02.2021**

**Sample Received on:** 05.02.2021

**Analysis Duration:** 05.02.2021 to 18.02.2021

## RESULTS (Soil Quality Analysis)

### SAMPLING DETAILS

|                                     |                              |
|-------------------------------------|------------------------------|
| <b>Date of Sampling</b>             | : 04.02.2021                 |
| <b>Sampling Location</b>            | : Village Singhpur           |
| <b>Sample Collected by</b>          | : Mr. Rameshwar Kumar        |
| <b>Sampling Protocol</b>            | : GRC/LAB/STP/SOIL/01        |
| <b>Weather Condition</b>            | : Clear Sky                  |
| <b>Sample Quantity</b>              | : 5 kg                       |
| <b>Sample Packing &amp; Marking</b> | : Zip Polybag; JVS/FEB/SQ-02 |

| S. No. | Parameters               | Units      | Results    | Test Method   |
|--------|--------------------------|------------|------------|---|
| 1      | Texture                  | -          | Sandy Loam | GRC/LAB/STP/SOIL/02 dt: 2018  |
|        | Sand                     | %          | 73.5       |   |
|        | Silt                     | %          | 14.6       |   |
|        | Clay                     | %          | 11.9       |   |
| 2      | Cation exchange capacity | meq/100 gm | 10.8       | IS 2720 (Part-24): 1976 (RA 2015)                                       |
| 3      | Sodium Absorption Ratio  | -          | 0.48       | GRC/LAB/STP/SOIL/10 dt: 2018  |
| 4      | Water Holding Capacity   | %          | 22.9       | GRC/LAB/STP/SOIL/11 dt: 2018  |
| 5      | Porosity                 | %          | 43.1       | GRC/LAB/STP/SOIL/12 dt: 2018  |
| 6      | Permeability             | cm/hrs     | 2.5        | IS 2720 (Part-17): 1986 (RA 2016)                                       |
| 7      | Bulk Density             | gm/cc      | 1.26       | SOP No. GRC-LAB/STP-SOIL/13;<br>Issue No.: 01; Issue date<br>06.01.2020 |

**\*\*End of Report\*\***



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## Test Report

**Report Code: S20210219-001(A)**

**Issued To:** Grain based Distillery "M/s JVS Biofuel Pvt Ltd"

120 KLPD along with 4.0 MW power plant,

Vill-Jatwar, Tehsil Shahzadpur, Dist. Ambala, Haryana.

**Sample Description:** Soil Sample

**Issue Date: 19.02.2021**

**Sample Received on:** 05.02.2021

**Analysis Duration:** 05.02.2021 to 18.02.2021

## RESULTS

(Soil Quality Analysis)

### SAMPLING DETAILS

|                                     |                                |
|-------------------------------------|--------------------------------|
| <b>Date of Sampling</b>             | : 04.02.2021                   |
| <b>Sampling Location</b>            | : Project Site                 |
| <b>Sample Collected by</b>          | : Mr. Rameshwar Kumar          |
| <b>Sampling Protocol</b>            | : GRC/LAB/STP/SOIL/01          |
| <b>Weather Condition</b>            | : Clear Sky                    |
| <b>Sample Quantity</b>              | : 5 kg                         |
| <b>Sample Packing &amp; Marking</b> | : Zip Polybag; JVS/B/FEB/SQ-01 |

| S. No. | Parameters                    | Units    | Results | Test Method   |
|--------|-------------------------------|----------|---------|---|
| 1      | pH (1:2 Suspension)           | -        | 7.87    | IS 2720 (Part-26): 1987 (RA 2016)   |
| 2      | Electrical Conductivity (1:2) | µmhos/cm | 156     | IS 14767: 2000 (RA 2016)  |
| 3      | Available Potassium as K      | mg/kg    | 112     | GRC/LAB/STP/SOIL/04 dt: 2018  |
| 4      | Exchangeable Sodium as Na     | mg/kg    | 87      | GRC/LAB/STP/SOIL/03 dt: 2018  |
| 5      | Exchangeable Calcium as Ca    | mg/kg    | 1548    | GRC/LAB/STP/SOIL/05 dt: 2018  |
| 6      | Exchangeable Magnesium as Mg  | mg/kg    | 326     | GRC/LAB/STP/SOIL/06 dt: 2018  |
| 7      | Total Phosphorus as P         | mg/kg    | 2.9     | GRC/LAB/STP/SOIL/09 dt: 2018  |
| 8      | Organic Matter                | %        | 0.37    | GRC/LAB/STP/SOIL/08 dt: 2018  |
| 9      | Total Nitrogen as N           | mg/kg    | 47      | IS 2720 (Part-22): 1972 (RA 2015)   |
| 10     | Total Zinc as Zn              | mg/kg    | 18.9    | 3050-B, PP 1-12, USEPA 2nd Revision, Dec.1996/ 3120-B, APHA 23rd Ed. 2017 |
| 11     | Total Lead as Pb              | mg/kg    | 3.5     | 3050-B, PP 1-12, USEPA 2nd Revision, Dec.1996/ 3120-B, APHA 23rd Ed. 2017 |
| 12     | Total Copper as Cu            | mg/kg    | 2.3     | 3050-B, PP 1-12, USEPA 2nd Revision, Dec.1996/ 3120-B, APHA 23rd Ed. 2017 |
| 13     | Manganese as Mn               | mg/kg    | 187     | 3050-B, PP 1-12, USEPA 2nd Revision, Dec.1996/ 3120-B, APHA 23rd Ed. 2017 |
| 14     | Total Cadmium as Cd           | mg/kg    | 5.1     | 3050-B, PP 1-12, USEPA 2nd Revision, Dec.1996/ 3120-B, APHA 23rd Ed. 2017 |

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## Test Report

**Report Code: S20210219-001(B)**

**Issued To:** Grain based Distillery "M/s JVS Biofuel Pvt Ltd"  
120 KLPD along with 4.0 MW power plant,  
Vill-Jatwar, Tehsil Shahzadpur, Dist. Ambala, Haryana.

**Sample Description:** Soil Sample

**Issue Date: 19.02.2021**

**Sample Received on:** 05.02.2021

**Analysis Duration:** 05.02.2021 to 18.02.2021

## RESULTS (Soil Quality Analysis)

### SAMPLING DETAILS

|                                     |                                |
|-------------------------------------|--------------------------------|
| <b>Date of Sampling</b>             | : 04.02.2021                   |
| <b>Sampling Location</b>            | : Project Site                 |
| <b>Sample Collected by</b>          | : Mr. Rameshwar Kumar          |
| <b>Sampling Protocol</b>            | : GRC/LAB/STP/SOIL/01          |
| <b>Weather Condition</b>            | : Clear Sky                    |
| <b>Sample Quantity</b>              | : 5 kg                         |
| <b>Sample Packing &amp; Marking</b> | : Zip Polybag; JVS/B/FEB/SQ-01 |

| S. No. | Parameters               | Units      | Results | Test Method  |
|--------|--------------------------|------------|---------|--|
| 1      | Texture                  | -          |         | GRC/LAB/STP/SOIL/02 dt: 2018                           |
|        | Sand                     | %          | 71.2    |  |
|        | Silt                     | %          | 16.1    |  |
|        | Clay                     | %          | 12.7    |  |
| 2      | Cation exchange capacity | meq/100 gm | 11.1    | IS 2720 (Part-24): 1976 (RA 2015)                      |
| 3      | Sodium Absorption Ratio  | -          | 0.52    | GRC/LAB/STP/SOIL/10 dt: 2018                           |
| 4      | Water Holding Capacity   | %          | 21.6    | GRC/LAB/STP/SOIL/11 dt: 2018                           |
| 5      | Porosity                 | %          | 42.5    | GRC/LAB/STP/SOIL/12 dt: 2018                           |
| 6      | Permeability             | cm/hrs     | 2.1     | IS 2720 (Part-17): 1986 (RA 2016)                      |
| 7      | Bulk Density             | gm/cc      | 1.29    | SOP No. GRC-LAB/STP-SOIL/13; Issue No.: 01; Issue date |

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## Test Report

Report Code: W20210219-001 (A)

Issue Date: 19.02.2021

Issued To: Grain based Distillery "M/s JVS Biofuel Pvt Ltd"  
120 KLPD along with 4.0 MW power plant,  
Vill-Jatwar, Tehsil Shahzadpur, Dist. Ambala, Haryana.

Sample Received on: 05.02.2021  
Analysis Duration: 05.02.2021 to 18.02.2021

Sample Description: Ground Water

## RESULTS

(Water Quality Analysis)

### SAMPLING DETAILS

|                       |                                   |
|-----------------------|-----------------------------------|
| Date of Sampling      | : 04.02.2021                      |
| Sampling Location     | : Project Site                    |
| Sample Collected by   | : Mr. Rameshwar Kumar             |
| Sampling Protocol     | : IS-3025(Pt-1)-1987 RA 2003      |
| Weather Condition     | : Clear Sky                       |
| Sample Quantity       | : 5 L                             |
| Sample Packing & Mark | : Plastic Bottle & JVSB/FEB/GW-01 |

| S. No. | Parameters                             | Units | Limits (as per IS:10500-2012) |                   | Results | Test Method                          |
|--------|--|-------|-------------------------------|-------------------|---------|--------------------------------------|
|        |  |       | Desirable Limit               | Permissible Limit |         |                                      |
| 1      | Color                                  | Hazen | 5                             | 15                | <5      | IS : 3025(Pt-4) 1983 (RA 2017)       |
| 2      | Turbidity                              | NTU   | 1                             | 5                 | <1      | IS : 3025(Pt-10)-1984 (RA 2017)      |
| 3      | pH                                     | -     | 6.5-8.5                       | No Relaxation     | 7.52    | IS : 3025(Pt-11)1983 (RA 2017)       |
| 4      | Total Hardness (as CaCO <sub>3</sub> ) | mg/l  | 200                           | 600               | 323     | IS : 3025(Pt-21) 2009, (RA 2014)     |
| 5      | Iron (as Fe)                           | mg/l  | 1                             | No Relaxation     | 0.18    | 3120B, APHA 23rd Ed., 2017 (ICP-OES) |
| 6      | Chlorides (as Cl)                      | mg/l  | 250                           | 1000              | 89      | IS : 3025(Pt-32)1988 (RA 2014)       |
| 7      | Fluoride (as F)                        | mg/l  | 1                             | 1.5               | 0.8     | 4500F(D), APHA 23rd Ed., 2017        |
| 8      | TDS                                    | mg/l  | 500                           | 2000              | 774     | IS: 3025(Pt-16)1984 (RA 2017)        |
| 9      | Calcium (as Ca <sup>2+</sup> )         | mg/l  | 75                            | 200               | 78      | IS : 3025(Pt-40)1991 (RA 2014)       |
| 10     | Magnesium (as Mg <sup>2+</sup> )       | mg/l  | 30                            | 100               | 31      | IS : 3025(Pt-40)1991 (RA 2014)       |
| 11     | Copper (as Cu)                         | mg/l  | 0.05                          | 1.5               | <0.01   | 3120B, APHA 23rd Ed., 2017 (ICP-OES) |
| 12     | Manganese (as Mn)                      | mg/l  | 0.1                           | 0.3               | <0.01   | 3120B, APHA 23rd Ed., 2017 (ICP-OES) |
| 13     | Sulphate (as SO <sub>4</sub> )         | mg/l  | 200                           | 400               | 87      | IS : 3025(Pt-24)1986 (RA 2014)       |
| 14     | Nitrate (as NO <sub>3</sub> )          | mg/l  | 45                            | No Relaxation     | 7       | IS : 3025(Pt-34)1988 (RA 2014)       |

Rahul Singh (Sr. Chemist)  
Authorized Signatory  
(Seal & Signature)

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Website: <https://www.grc-india.com>, E-mail: [lab@grc-india.com](mailto:lab@grc-india.com); [info@grc-india.com](mailto:info@grc-india.com)

## Test Report

Report Code: W20210219-001 (A)

Issue Date: 19.02.2021

|    |                                       |      |       |               |        |  |
|----|---------------------------------------|------|-------|---------------|--------|--|
| 15 | Mercury (as Hg)                       | mg/l | 0.001 | No Relaxation | <0.001 | 3120B, APHA 23nd Ed., 2017 (ICP-OES-VGA) |
| 16 | Cadmium (as Cd)                       | mg/l | 0.003 | No Relaxation | <0.01  | 3120B, APHA 23nd Ed., 2017 (ICP-OES)     |
| 17 | Selenium (as Se)                      | mg/l | 0.01  | No Relaxation | <0.01  | 3120B, APHA 23nd Ed., 2017 (ICP-OES)     |
| 18 | Arsenic (as As)                       | mg/l | 0.01  | 0.05          | <0.01  | 3120B, APHA 23nd Ed., 2017 (ICP-OES-VGA) |
| 19 | Lead (as Pb)                          | mg/l | 0.01  | No Relaxation | <0.01  | 3120B, APHA 23nd Ed., 2017 (ICP-OES)     |
| 20 | Zinc (as Zn)                          | mg/l | 5     | 15            | 0.06   | 3120B, APHA 23nd Ed., 2017 (ICP-OES)     |
| 21 | Total Chromium (as Cr <sup>3+</sup> ) | mg/l | 0.05  | No Relaxation | <0.01  | IS : 3025(Pt-52)2003 (RA 2014)           |
| 22 | Alkalinity (as CaCO <sub>3</sub> )    | mg/l | 200   | 600           | 389    | IS: 3025(Pt-23)1986 (RA 2014)            |
| 23 | Aluminum (as Al)                      | mg/l | 0.03  | 0.2           | <0.01  | 3120B, APHA 23nd Ed., 2017 (ICP-OES)     |
| 24 | Boron (as B)                          | mg/l | 0.5   | 1             | 0.1    | 3120B, APHA 23nd Ed., 2017 (ICP-OES)     |

**\*\* End of Report \*\***

Rahul Singh (Sr. Chemist)  
Authorized Signatory  
(Seal & Signature)

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## Test Report

**Report Code: W20210219-001 (B)**

**Issue Date: 19.02.2021**

**Issued To:** Grain based Distillery "M/s JVS Biofuel Pvt Ltd"  
120 KLPD along with 4.0 MW power plant,  
Vill-Jatwar, Tehsil Shahzadpur, Dist. Ambala, Haryana.

**Sample Received on:** 05.02.2021  
**Analysis Duration:** 05.02.2021 to 11.02.2021

**Sample Description:** Ground Water

## RESULTS

(Water Quality Analysis)

### SAMPLING DETAILS

**Date of Sampling** : 04.02.2021  
**Sampling Location** : Project Site  
**Sample Collected by** : Mr. Rameshwar Kumar  
**Sampling Protocol** : IS-1622: 1981, RA 2003  
**Weather Condition** : Clear Sky  
**Sample Quantity** : 500 mL  
**Sample Packing & Mark** : Glass Bottle & JVSB/FEB/GW-01

| S. No.                            | Parameters     | Units     | Limits (as per IS:10500-2012) | Results           | Test Method              |
|-----------------------------------|----------------|-----------|-------------------------------|-------------------|--------------------------|
| <b>Bacteriological Parameters</b> |                |           |                               |                   |                          |
| 1                                 | Total Coliform | MPN/100ml | shall not be detectable       | Not Detected (<2) | IS : 1622-1981 (RA.2003) |
| 2                                 | E. coli        | MPN/100ml | shall not be detectable       | Absent            | IS : 1622-1981 (RA 2003) |

**\*\* End of Report \*\***

Ajay Kumar Sharma (Quality Manager)  
  
Authorized Signatory  
(Seal & Signature)

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## Test Report

Report Code: W20210219-001 (A)

Issue Date: 19.02.2021

Issued To: Grain based Distillery "M/s JVS Biofuel Pvt Ltd"  
120 KLPD along with 4.0 MW power plant,  
Vill-Jatwar, Tehsil Shahzadpur, Dist. Ambala, Haryana.

Sample Received on: 05.02.2021  
Analysis Duration: 05.02.2021 to 18.02.2021

Sample Description: Ground Water

## RESULTS

(Water Quality Analysis)

### SAMPLING DETAILS

|                       |                                   |
|-----------------------|-----------------------------------|
| Date of Sampling      | : 04.02.2021                      |
| Sampling Location     | : Project Site                    |
| Sample Collected by   | : Mr. Rameshwar Kumar             |
| Sampling Protocol     | : IS-3025(Pt-1)-1987 RA 2003      |
| Weather Condition     | : Clear Sky                       |
| Sample Quantity       | : 5 L                             |
| Sample Packing & Mark | : Plastic Bottle & JVSB/FEB/GW-01 |

| S. No. | Parameters   | Units | Limits (as per IS:10500-2012) |                   | Results   | Test Method                      |
|--------|--|-------|-------------------------------|-------------------|-----------|----------------------------------|
|        |  |       | Desirable Limit               | Permissible Limit |           |                                  |
| 1      | Odour  | -     | Agreeable                     | Agreeable         | Agreeable | IS : 3025(Pt-5) 1983 (RA 2017)   |
| 2      | Taste  | -     | Agreeable                     | Agreeable         | Agreeable | IS : 3025(Pt-8) 1983 (RA 2017)   |
| 3      | Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH) | mg/l  | 0.001                         | 0.002             | <0.01     | 5530-C, APHA 23nd Ed., 2017      |
| 4      | Cyanide (as CN)  | mg/l  | 0.05                          | No Relaxation     | <0.01     | 4500-CN (E), APHA 23nd Ed., 2017 |
| 5      | Anionic Detergent (as MBAS)                              | mg/l  | 0.2                           | 1                 | <0.01     | 5540-C, APHA 23nd Ed., 2017      |

**\*\* End of Report \*\***

Rahul Singh (Sr. Chemist)  
Authorized Signatory  
(Seal & Signature)

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## Test Report

Report Code: W20210219-002 (A)

Issue Date: 19.02.2021

Issued To: Grain based Distillery "M/s JVS Biofuel Pvt Ltd"  
120 KLPD along with 4.0 MW power plant,  
Vill-Jatwar, Tehsil Shahzadpur, Dist. Ambala, Haryana.

Sample Received on: 05.02.2021  
Analysis Duration: 05.02.2021 to 18.02.2021

Sample Description: Ground Water

## RESULTS

(Water Quality Analysis)

### SAMPLING DETAILS

|                       |                                   |
|-----------------------|-----------------------------------|
| Date of Sampling      | : 04.02.2021                      |
| Sampling Location     | : Village Budha Khera             |
| Sample Collected by   | : Mr. Rameshwar Kumar             |
| Sampling Protocol     | : IS-3025(Pt-1)-1987 RA 2003      |
| Weather Condition     | : Clear Sky                       |
| Sample Quantity       | : 5 L                             |
| Sample Packing & Mark | : Plastic Bottle & JVSB/FEB/GW-02 |

| S. No. | Parameters                             | Units | Limits (as per IS:10500-2012) |                   | Results | Test Method                          |
|--------|--|-------|-------------------------------|-------------------|---------|--------------------------------------|
|        |  |       | Desirable Limit               | Permissible Limit |         |                                      |
| 1      | Color                                  | Hazen | 5                             | 15                | <5      | IS : 3025(Pt-4) 1983 (RA 2017)       |
| 2      | Turbidity                              | NTU   | 1                             | 5                 | <1      | IS : 3025(Pt-10)-1984 (RA 2017)      |
| 3      | pH                                     | -     | 6.5-8.5                       | No Relaxation     | 8.07    | IS : 3025(Pt-11)1983 (RA 2017)       |
| 4      | Total Hardness (as CaCO <sub>3</sub> ) | mg/l  | 200                           | 600               | 345     | IS : 3025(Pt-21) 2009, (RA 2014)     |
| 5      | Iron (as Fe)                           | mg/l  | 1                             | No Relaxation     | 0.20    | 3120B, APHA 23rd Ed., 2017 (ICP-OES) |
| 6      | Chlorides (as Cl)                      | mg/l  | 250                           | 1000              | 93      | IS : 3025(Pt-32)1988 (RA 2014)       |
| 7      | Fluoride (as F)                        | mg/l  | 1                             | 1.5               | 0.9     | 4500F(D), APHA 23rd Ed., 2017        |
| 8      | TDS                                    | mg/l  | 500                           | 2000              | 834     | IS: 3025(Pt-16)1984 (RA 2017)        |
| 9      | Calcium (as Ca <sup>2+</sup> )         | mg/l  | 75                            | 200               | 83      | IS : 3025(Pt-40)1991 (RA 2014)       |
| 10     | Magnesium (as Mg <sup>2+</sup> )       | mg/l  | 30                            | 100               | 33      | IS : 3025(Pt-40)1991 (RA 2014)       |
| 11     | Copper (as Cu)                         | mg/l  | 0.05                          | 1.5               | <0.01   | 3120B, APHA 23rd Ed., 2017 (ICP-OES) |
| 12     | Manganese (as Mn)                      | mg/l  | 0.1                           | 0.3               | <0.01   | 3120B, APHA 23rd Ed., 2017 (ICP-OES) |
| 13     | Sulphate (as SO <sub>4</sub> )         | mg/l  | 200                           | 400               | 98      | IS : 3025(Pt-24)1986 (RA 2014)       |
| 14     | Nitrate (as NO <sub>3</sub> )          | mg/l  | 45                            | No Relaxation     | 9       | IS : 3025(Pt-34)1988 (RA 2014)       |

Rahul Singh (Sr. Chemist)  
Authorized Signatory  
(Seal & Signature)

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## Test Report

Report Code: W20210219-002 (A)

Issue Date: 19.02.2021

|    |                                       |      |       |               |        |  |
|----|---------------------------------------|------|-------|---------------|--------|--|
| 15 | Mercury (as Hg)                       | mg/l | 0.001 | No Relaxation | <0.001 | 3120B, APHA 23nd Ed., 2017 (ICP-OES-VGA) |
| 16 | Cadmium (as Cd)                       | mg/l | 0.003 | No Relaxation | <0.01  | 3120B, APHA 23nd Ed., 2017 (ICP-OES)     |
| 17 | Selenium (as Se)                      | mg/l | 0.01  | No Relaxation | <0.01  | 3120B, APHA 23nd Ed., 2017 (ICP-OES)     |
| 18 | Arsenic (as As)                       | mg/l | 0.01  | 0.05          | <0.01  | 3120B, APHA 23nd Ed., 2017 (ICP-OES-VGA) |
| 19 | Lead (as Pb)                          | mg/l | 0.01  | No Relaxation | <0.01  | 3120B, APHA 23nd Ed., 2017 (ICP-OES)     |
| 20 | Zinc (as Zn)                          | mg/l | 5     | 15            | .08    | 3120B, APHA 23nd Ed., 2017 (ICP-OES)     |
| 21 | Total Chromium (as Cr <sup>3+</sup> ) | mg/l | 0.05  | No Relaxation | <0.01  | IS : 3025(Pt-52)2003 (RA 2014)           |
| 22 | Alkalinity (as CaCO <sub>3</sub> )    | mg/l | 200   | 600           | 417    | IS: 3025(Pt-23)1986 (RA 2014)            |
| 23 | Aluminum (as Al)                      | mg/l | 0.03  | 0.2           | <0.01  | 3120B, APHA 23nd Ed., 2017 (ICP-OES)     |
| 24 | Boron (as B)                          | mg/l | 0.5   | 1             | 0.2    | 3120B, APHA 23nd Ed., 2017 (ICP-OES)     |

**\*\* End of Report \*\***

Rahul Singh (Sr. Chemist)  
Authorized Signatory  
(Seal & Signature)

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## Test Report

**Report Code: W20210219-002 (B)**

**Issue Date: 19.02.2021**

**Issued To:** Grain based Distillery "M/s JVS Biofuel Pvt Ltd"  
120 KLPD along with 4.0 MW power plant,  
Vill-Jatwar, Tehsil Shahzadpur, Dist. Ambala, Haryana.

**Sample Received on:** 05.02.2021  
**Analysis Duration:** 05.02.2021 to 11.02.2021

**Sample Description:** Ground Water

## RESULTS

(Water Quality Analysis)

### SAMPLING DETAILS

**Date of Sampling** : 04.02.2021  
**Sampling Location** : Village Budha Khera  
**Sample Collected by** : Mr. Rameshwar Kumar  
**Sampling Protocol** : IS-1622: 1981, RA 2003  
**Weather Condition** : Clear Sky  
**Sample Quantity** : 500 mL  
**Sample Packing & Mark** : Glass Bottle & JVSB/FEB/GW-02

| S. No.                            | Parameters     | Units     | Limits (as per IS:10500-2012) | Results           | Test Method              |
|-----------------------------------|----------------|-----------|-------------------------------|-------------------|--------------------------|
| <b>Bacteriological Parameters</b> |                |           |                               |                   |                          |
| 1                                 | Total Coliform | MPN/100ml | shall not be detectable       | Not Detected (<2) | IS : 1622-1981 (RA.2003) |
| 2                                 | E. coli        | MPN/100ml | shall not be detectable       | Absent            | IS : 1622-1981 (RA 2003) |

**\*\* End of Report \*\***

Ajay Kumar Sharma (Quality Manager)  
  
Authorized Signatory  
(Seal & Signature)

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## Test Report

**Report Code: W20210219-002 (B)**

**Issue Date: 19.02.2021**

**Issued To:** Grain based Distillery "M/s JVS Biofuel Pvt Ltd"  
120 KLPD along with 4.0 MW power plant,  
Vill-Jatwar, Tehsil Shahzadpur, Dist. Ambala, Haryana.

**Sample Received on:** 05.02.2021  
**Analysis Duration:** 05.02.2021 to 18.02.2021

**Sample Description:** Ground Water

## RESULTS

(Water Quality Analysis)

### SAMPLING DETAILS

|                                  |                                   |
|----------------------------------|-----------------------------------|
| <b>Date of Sampling</b>          | : 04.02.2021                      |
| <b>Sampling Location</b>         | : Village Budha Khera             |
| <b>Sample Collected by</b>       | : Mr. Rameshwar Kumar             |
| <b>Sampling Protocol</b>         | : IS-3025(Pt-1)-1987 RA 2003      |
| <b>Weather Condition</b>         | : Clear Sky                       |
| <b>Sample Quantity</b>           | : 5 L                             |
| <b>Sample Packing &amp; Mark</b> | : Plastic Bottle & JVSB/FEB/GW-02 |

| S. No. | Parameters   | Units | Limits (as per IS:10500-2012) |                   | Results   | Test Method                      |
|--------|--|-------|-------------------------------|-------------------|-----------|----------------------------------|
|        |  |       | Desirable Limit               | Permissible Limit |           |                                  |
| 1      | Odour  | -     | Agreeable                     | Agreeable         | Agreeable | IS : 3025(Pt-5) 1983 (RA 2017)   |
| 2      | Taste  | -     | Agreeable                     | Agreeable         | Agreeable | IS : 3025(Pt-8) 1983 (RA 2017)   |
| 3      | Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH) | mg/l  | 0.001                         | 0.002             | <0.01     | 5530-C, APHA 23nd Ed., 2017      |
| 4      | Cyanide (as CN)  | mg/l  | 0.05                          | No Relaxation     | <0.01     | 4500-CN (E), APHA 23nd Ed., 2017 |
| 5      | Anionic Detergent (as MBAS)                              | mg/l  | 0.2                           | 1                 | <0.01     | 5540-C, APHA 23nd Ed., 2017      |

**\*\* End of Report \*\***

Rahul Singh (Sr. Chemist)  
Authorized Signatory  
(Seal & Signature)

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## Test Report

Report Code: W20210219-003 (A)

Issue Date: 19.02.2021

Issued To: Grain based Distillery "M/s JVS Biofuel Pvt Ltd"  
120 KLPD along with 4.0 MW power plant,  
Vill-Jatwar, Tehsil Shahzadpur, Dist. Ambala, Haryana.

Sample Received on: 05.02.2021  
Analysis Duration: 05.02.2021 to 18.02.2021

Sample Description: Ground Water

## RESULTS

(Water Quality Analysis)

### SAMPLING DETAILS

|                       |                                   |
|-----------------------|-----------------------------------|
| Date of Sampling      | : 04.02.2021                      |
| Sampling Location     | : Village Rani Majra              |
| Sample Collected by   | : Mr. Rameshwar Kumar             |
| Sampling Protocol     | : IS-3025(Pt-1)-1987 RA 2003      |
| Weather Condition     | : Clear Sky                       |
| Sample Quantity       | : 5 L                             |
| Sample Packing & Mark | : Plastic Bottle & JVSB/FEB/GW-03 |

| S. No. | Parameters                             | Units | Limits (as per IS:10500-2012) |                   | Results | Test Method                          |
|--------|--|-------|-------------------------------|-------------------|---------|--------------------------------------|
|        |  |       | Desirable Limit               | Permissible Limit |         |                                      |
| 1      | Color                                  | Hazen | 5                             | 15                | <5      | IS : 3025(Pt-4) 1983 (RA 2017)       |
| 2      | Turbidity                              | NTU   | 1                             | 5                 | <1      | IS : 3025(Pt-10)-1984 (RA 2017)      |
| 3      | pH                                     | -     | 6.5-8.5                       | No Relaxation     | 8.09    | IS : 3025(Pt-11)1983 (RA 2017)       |
| 4      | Total Hardness (as CaCO <sub>3</sub> ) | mg/l  | 200                           | 600               | 415     | IS : 3025(Pt-21) 2009, (RA 2014)     |
| 5      | Iron (as Fe)                           | mg/l  | 1                             | No Relaxation     | 0.17    | 3120B, APHA 23rd Ed., 2017 (ICP-OES) |
| 6      | Chlorides (as Cl)                      | mg/l  | 250                           | 1000              | 105     | IS : 3025(Pt-32)1988 (RA 2014)       |
| 7      | Fluoride (as F)                        | mg/l  | 1                             | 1.5               | 0.7     | 4500F(D), APHA 23rd Ed., 2017        |
| 8      | TDS                                    | mg/l  | 500                           | 2000              | 1006    | IS: 3025(Pt-16)1984 (RA 2017)        |
| 9      | Calcium (as Ca <sup>2+</sup> )         | mg/l  | 75                            | 200               | 100     | IS : 3025(Pt-40)1991 (RA 2014)       |
| 10     | Magnesium (as Mg <sup>2+</sup> )       | mg/l  | 30                            | 100               | 40      | IS : 3025(Pt-40)1991 (RA 2014)       |
| 11     | Copper (as Cu)                         | mg/l  | 0.05                          | 1.5               | <0.01   | 3120B, APHA 23rd Ed., 2017 (ICP-OES) |
| 12     | Manganese (as Mn)                      | mg/l  | 0.1                           | 0.3               | <0.01   | 3120B, APHA 23rd Ed., 2017 (ICP-OES) |
| 13     | Sulphate (as SO <sub>4</sub> )         | mg/l  | 200                           | 400               | 85      | IS : 3025(Pt-24)1986 (RA 2014)       |
| 14     | Nitrate (as NO <sub>3</sub> )          | mg/l  | 45                            | No Relaxation     | 11      | IS : 3025(Pt-34)1988 (RA 2014)       |

Rahul Singh (Sr. Chemist)  
Authorized Signatory  
(Seal & Signature)

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## Test Report

Report Code: W20210219-003 (A)

Issue Date: 19.02.2021

|    |                                       |      |       |               |        |  |
|----|---------------------------------------|------|-------|---------------|--------|--|
| 15 | Mercury (as Hg)                       | mg/l | 0.001 | No Relaxation | <0.001 | 3120B, APHA 23nd Ed., 2017 (ICP-OES-VGA) |
| 16 | Cadmium (as Cd)                       | mg/l | 0.003 | No Relaxation | <0.01  | 3120B, APHA 23nd Ed., 2017 (ICP-OES)     |
| 17 | Selenium (as Se)                      | mg/l | 0.01  | No Relaxation | <0.01  | 3120B, APHA 23nd Ed., 2017 (ICP-OES)     |
| 18 | Arsenic (as As)                       | mg/l | 0.01  | 0.05          | <0.01  | 3120B, APHA 23nd Ed., 2017 (ICP-OES-VGA) |
| 19 | Lead (as Pb)                          | mg/l | 0.01  | No Relaxation | <0.01  | 3120B, APHA 23nd Ed., 2017 (ICP-OES)     |
| 20 | Zinc (as Zn)                          | mg/l | 5     | 15            | 0.06   | 3120B, APHA 23nd Ed., 2017 (ICP-OES)     |
| 21 | Total Chromium (as Cr <sup>3+</sup> ) | mg/l | 0.05  | No Relaxation | <0.01  | IS : 3025(Pt-52)2003 (RA 2014)           |
| 22 | Alkalinity (as CaCO <sub>3</sub> )    | mg/l | 200   | 600           | 564    | IS: 3025(Pt-23)1986 (RA 2014)            |
| 23 | Aluminum (as Al)                      | mg/l | 0.03  | 0.2           | <0.01  | 3120B, APHA 23nd Ed., 2017 (ICP-OES)     |
| 24 | Boron (as B)                          | mg/l | 0.5   | 1             | 0.2    | 3120B, APHA 23nd Ed., 2017 (ICP-OES)     |

**\*\* End of Report \*\***

Rahul Singh (Sr. Chemist)  
Authorized Signatory  
(Seal & Signature)

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## Test Report

**Report Code: W20210219-003 (B)**

**Issue Date: 19.02.2021**

**Issued To:** Grain based Distillery "M/s JVS Biofuel Pvt Ltd"  
120 KLPD along with 4.0 MW power plant,  
Vill-Jatwar, Tehsil Shahzadpur, Dist. Ambala, Haryana.

**Sample Received on:** 05.02.2021  
**Analysis Duration:** 05.02.2021 to 11.02.2021

**Sample Description:** Ground Water

## RESULTS

(Water Quality Analysis)

### SAMPLING DETAILS

**Date of Sampling** : 04.02.2021  
**Sampling Location** : Village Rani Majra  
**Sample Collected by** : Mr. Rameshwar Kumar  
**Sampling Protocol** : IS-1622: 1981, RA 2003  
**Weather Condition** : Clear Sky  
**Sample Quantity** : 500 mL  
**Sample Packing & Mark** : Glass Bottle & JVSB/FEB/GW-03

| S. No.                            | Parameters     | Units     | Limits (as per IS:10500-2012) | Results           | Test Method              |
|-----------------------------------|----------------|-----------|-------------------------------|-------------------|--------------------------|
| <b>Bacteriological Parameters</b> |                |           |                               |                   |                          |
| 1                                 | Total Coliform | MPN/100ml | shall not be detectable       | Not Detected (<2) | IS : 1622-1981 (RA.2003) |
| 2                                 | E. coli        | MPN/100ml | shall not be detectable       | Absent            | IS : 1622-1981 (RA 2003) |

**\*\* End of Report \*\***

Ajay Kumar Sharma (Quality Manager)  
  
Authorized Signatory  
(Seal & Signature)

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## Test Report

**Report Code: W20210219-003 (B)**

**Issue Date: 19.02.2021**

**Issued To:** Grain based Distillery "M/s JVS Biofuel Pvt Ltd"  
120 KLPD along with 4.0 MW power plant,  
Vill-Jatwar, Tehsil Shahzadpur, Dist. Ambala, Haryana.

**Sample Received on:** 05.02.2021  
**Analysis Duration:** 05.02.2021 to 18.02.2021

**Sample Description:** Ground Water

## RESULTS

(Water Quality Analysis)

### SAMPLING DETAILS

|                                  |                                   |
|----------------------------------|-----------------------------------|
| <b>Date of Sampling</b>          | : 04.02.2021                      |
| <b>Sampling Location</b>         | : Village Rani Majra              |
| <b>Sample Collected by</b>       | : Mr. Rameshwar Kumar             |
| <b>Sampling Protocol</b>         | : IS-3025(Pt-1)-1987 RA 2003      |
| <b>Weather Condition</b>         | : Clear Sky                       |
| <b>Sample Quantity</b>           | : 5 L                             |
| <b>Sample Packing &amp; Mark</b> | : Plastic Bottle & JVSB/FEB/GW-03 |

| S. No. | Parameters   | Units | Limits (as per IS:10500-2012) |                   | Results   | Test Method                      |
|--------|--|-------|-------------------------------|-------------------|-----------|----------------------------------|
|        |  |       | Desirable Limit               | Permissible Limit |           |                                  |
| 1      | Odour  | -     | Agreeable                     | Agreeable         | Agreeable | IS : 3025(Pt-5) 1983 (RA 2017)   |
| 2      | Taste  | -     | Agreeable                     | Agreeable         | Agreeable | IS : 3025(Pt-8) 1983 (RA 2017)   |
| 3      | Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH) | mg/l  | 0.001                         | 0.002             | <0.01     | 5530-C, APHA 23nd Ed., 2017      |
| 4      | Cyanide (as CN)  | mg/l  | 0.05                          | No Relaxation     | <0.01     | 4500-CN (E), APHA 23nd Ed., 2017 |
| 5      | Anionic Detergent (as MBAS)                              | mg/l  | 0.2                           | 1                 | <0.01     | 5540-C, APHA 23nd Ed., 2017      |

**\*\* End of Report \*\***

Rahul Singh (Sr. Chemist)  
Authorized Signatory  
(Seal & Signature)

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## Test Report

Report Code: W20210219-004 (A)

Issue Date: 19.02.2021

Issued To: Grain based Distillery "M/s JVS Biofuel Pvt Ltd"  
120 KLPD along with 4.0 MW power plant,  
Vill-Jatwar, Tehsil Shahzadpur, Dist. Ambala, Haryana.

Sample Description: Ground Water

Sample Received on: 05.02.2021

Analysis Duration: 05.02.2021 to 18.02.2021

## RESULTS

(Water Quality Analysis)

### SAMPLING DETAILS

|                       |                                   |
|-----------------------|-----------------------------------|
| Date of Sampling      | : 04.02.2021                      |
| Sampling Location     | : Village Barana Jattan           |
| Sample Collected by   | : Mr. Rameshwar Kumar             |
| Sampling Protocol     | : IS-3025(Pt-1)-1987 RA 2003      |
| Weather Condition     | : Clear Sky                       |
| Sample Quantity       | : 5 L                             |
| Sample Packing & Mark | : Plastic Bottle & JVSB/FEB/GW-04 |

| S. No. | Parameters                             | Units | Limits (as per IS:10500-2012) |                   | Results | Test Method                          |
|--------|--|-------|-------------------------------|-------------------|---------|--------------------------------------|
|        |  |       | Desirable Limit               | Permissible Limit |         |                                      |
| 1      | Color                                  | Hazen | 5                             | 15                | <5      | IS : 3025(Pt-4) 1983 (RA 2017)       |
| 2      | Turbidity                              | NTU   | 1                             | 5                 | <1      | IS : 3025(Pt-10)-1984 (RA 2017)      |
| 3      | pH                                     | -     | 6.5-8.5                       | No Relaxation     | 7.58    | IS : 3025(Pt-11)1983 (RA 2017)       |
| 4      | Total Hardness (as CaCO <sub>3</sub> ) | mg/l  | 200                           | 600               | 335     | IS : 3025(Pt-21) 2009, (RA 2014)     |
| 5      | Iron (as Fe)                           | mg/l  | 1                             | No Relaxation     | 0.12    | 3120B, APHA 23rd Ed., 2017 (ICP-OES) |
| 6      | Chlorides (as Cl)                      | mg/l  | 250                           | 1000              | 123     | IS : 3025(Pt-32)1988 (RA 2014)       |
| 7      | Fluoride (as F)                        | mg/l  | 1                             | 1.5               | 0.6     | 4500F(D), APHA 23rd Ed., 2017        |
| 8      | TDS                                    | mg/l  | 500                           | 2000              | 845     | IS: 3025(Pt-16)1984 (RA 2017)        |
| 9      | Calcium (as Ca <sup>2+</sup> )         | mg/l  | 75                            | 200               | 80      | IS : 3025(Pt-40)1991 (RA 2014)       |
| 10     | Magnesium (as Mg <sup>2+</sup> )       | mg/l  | 30                            | 100               | 32      | IS : 3025(Pt-40)1991 (RA 2014)       |
| 11     | Copper (as Cu)                         | mg/l  | 0.05                          | 1.5               | <0.01   | 3120B, APHA 23rd Ed., 2017 (ICP-OES) |
| 12     | Manganese (as Mn)                      | mg/l  | 0.1                           | 0.3               | <0.01   | 3120B, APHA 23rd Ed., 2017 (ICP-OES) |
| 13     | Sulphate (as SO <sub>4</sub> )         | mg/l  | 200                           | 400               | 87      | IS : 3025(Pt-24)1986 (RA 2014)       |
| 14     | Nitrate (as NO <sub>3</sub> )          | mg/l  | 45                            | No Relaxation     | 8       | IS : 3025(Pt-34)1988 (RA 2014)       |

Rahul Singh (Sr. Chemist)  
Authorized Signatory  
(Seal & Signature)

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## Test Report

Report Code: W20210219-004 (A)

Issue Date: 19.02.2021

|    |                                       |      |       |               |        |  |
|----|---------------------------------------|------|-------|---------------|--------|--|
| 15 | Mercury (as Hg)                       | mg/l | 0.001 | No Relaxation | <0.001 | 3120B, APHA 23nd Ed., 2017 (ICP-OES-VGA) |
| 16 | Cadmium (as Cd)                       | mg/l | 0.003 | No Relaxation | <0.01  | 3120B, APHA 23nd Ed., 2017 (ICP-OES)     |
| 17 | Selenium (as Se)                      | mg/l | 0.01  | No Relaxation | <0.01  | 3120B, APHA 23nd Ed., 2017 (ICP-OES)     |
| 18 | Arsenic (as As)                       | mg/l | 0.01  | 0.05          | <0.01  | 3120B, APHA 23nd Ed., 2017 (ICP-OES-VGA) |
| 19 | Lead (as Pb)                          | mg/l | 0.01  | No Relaxation | <0.01  | 3120B, APHA 23nd Ed., 2017 (ICP-OES)     |
| 20 | Zinc (as Zn)                          | mg/l | 5     | 15            | 0.07   | 3120B, APHA 23nd Ed., 2017 (ICP-OES)     |
| 21 | Total Chromium (as Cr <sup>3+</sup> ) | mg/l | 0.05  | No Relaxation | <0.01  | IS : 3025(Pt-52)2003 (RA 2014)           |
| 22 | Alkalinity (as CaCO <sub>3</sub> )    | mg/l | 200   | 600           | 395    | IS: 3025(Pt-23)1986 (RA 2014)            |
| 23 | Aluminum (as Al)                      | mg/l | 0.03  | 0.2           | <0.01  | 3120B, APHA 23nd Ed., 2017 (ICP-OES)     |
| 24 | Boron (as B)                          | mg/l | 0.5   | 1             | 0.1    | 3120B, APHA 23nd Ed., 2017 (ICP-OES)     |

**\*\* End of Report \*\***

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Authorized Signatory  
(Seal & Signature)

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## Test Report

**Report Code: W20210219-004 (B)**

**Issue Date: 19.02.2021**

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120 KLPD along with 4.0 MW power plant,  
Vill-Jatwar, Tehsil Shahzadpur, Dist. Ambala, Haryana.

**Sample Received on:** 05.02.2021  
**Analysis Duration:** 05.02.2021 to 11.02.2021

**Sample Description:** Ground Water

## RESULTS

(Water Quality Analysis)

### SAMPLING DETAILS

**Date of Sampling** : 04.02.2021  
**Sampling Location** : Village Barana Jattan  
**Sample Collected by** : Mr. Rameshwar Kumar  
**Sampling Protocol** : IS-1622: 1981, RA 2003  
**Weather Condition** : Clear Sky  
**Sample Quantity** : 500 mL  
**Sample Packing & Mark** : Glass Bottle & JVSB/FEB/GW-04

| S. No.                            | Parameters     | Units     | Limits (as per IS:10500-2012) | Results           | Test Method              |
|-----------------------------------|----------------|-----------|-------------------------------|-------------------|--------------------------|
| <b>Bacteriological Parameters</b> |                |           |                               |                   |                          |
| 1                                 | Total Coliform | MPN/100ml | shall not be detectable       | Not Detected (<2) | IS : 1622-1981 (RA.2003) |
| 2                                 | E. coli        | MPN/100ml | shall not be detectable       | Absent            | IS : 1622-1981 (RA 2003) |

**\*\* End of Report \*\***

Ajay Kumar Sharma (Quality Manager)  
  
Authorized Signatory  
(Seal & Signature)

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## RESULTS

(Water Quality Analysis)

### SAMPLING DETAILS

|                                  |                                   |
|----------------------------------|-----------------------------------|
| <b>Date of Sampling</b>          | : 04.02.2021                      |
| <b>Sampling Location</b>         | : Village Barana Jattan           |
| <b>Sample Collected by</b>       | : Mr. Rameshwar Kumar             |
| <b>Sampling Protocol</b>         | : IS-3025(Pt-1)-1987 RA 2003      |
| <b>Weather Condition</b>         | : Clear Sky                       |
| <b>Sample Quantity</b>           | : 5 L                             |
| <b>Sample Packing &amp; Mark</b> | : Plastic Bottle & JVSB/FEB/GW-04 |

| S. No. | Parameters   | Units | Limits (as per IS:10500-2012) |                   | Results   | Test Method                      |
|--------|--|-------|-------------------------------|-------------------|-----------|----------------------------------|
|        |  |       | Desirable Limit               | Permissible Limit |           |                                  |
| 1      | Odour  | -     | Agreeable                     | Agreeable         | Agreeable | IS : 3025(Pt-5) 1983 (RA 2017)   |
| 2      | Taste  | -     | Agreeable                     | Agreeable         | Agreeable | IS : 3025(Pt-8) 1983 (RA 2017)   |
| 3      | Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH) | mg/l  | 0.001                         | 0.002             | <0.01     | 5530-C, APHA 23nd Ed., 2017      |
| 4      | Cyanide (as CN)  | mg/l  | 0.05                          | No Relaxation     | <0.01     | 4500-CN (E), APHA 23nd Ed., 2017 |
| 5      | Anionic Detergent (as MBAS)                              | mg/l  | 0.2                           | 1                 | <0.01     | 5540-C, APHA 23nd Ed., 2017      |

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Authorized Signatory  
(Seal & Signature)

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An ISO 9001: 2015, ISO 14001: 2015&ISO45001: 2018 (OH&S) Certified Lab.

NABL Accredited Laboratory (A Constituent Board of QCI), TC 7501 (Chemical & Biological)

Recognized by Ministry of Environment, Forest & Climate Change (MoEF&CC, GOI) under the E (P) Act, 1986

Head Office: F-375, Sector-63, Noida, Gautam Budh Nagar, U.P - 201 301

Phone No.: 0120 - 4044630, 4044660, 4323120, Fax: 0120 - 2406519, 0120 - 4044675

Website: <https://www.grc-india.com>, E-mail: [lab@grc-india.com](mailto:lab@grc-india.com); [info@grc-india.com](mailto:info@grc-india.com)

## Test Report

Report Code: W20210219-005 (A)

Issue Date: 19.02.2021

Issued To: Grain based Distillery "M/s JVS Biofuel Pvt Ltd"  
120 KLPD along with 4.0 MW power plant,  
Vill-Jatwar, Tehsil Shahzadpur, Dist. Ambala, Haryana.

Sample Received on: 05.02.2021  
Analysis Duration: 05.02.2021 to 18.02.2021

Sample Description: Ground Water

## RESULTS

(Water Quality Analysis)

### SAMPLING DETAILS

|                       |                                   |
|-----------------------|-----------------------------------|
| Date of Sampling      | : 04.02.2021                      |
| Sampling Location     | : Village Tepla                   |
| Sample Collected by   | : Mr. Rameshwar Kumar             |
| Sampling Protocol     | : IS-3025(Pt-1)-1987 RA 2003      |
| Weather Condition     | : Clear Sky                       |
| Sample Quantity       | : 5 L                             |
| Sample Packing & Mark | : Plastic Bottle & JVSB/FEB/GW-05 |

| S. No. | Parameters                             | Units | Limits (as per IS:10500-2012) |                   | Results | Test Method                          |
|--------|--|-------|-------------------------------|-------------------|---------|--------------------------------------|
|        |  |       | Desirable Limit               | Permissible Limit |         |                                      |
| 1      | Color                                  | Hazen | 5                             | 15                | <5      | IS : 3025(Pt-4) 1983 (RA 2017)       |
| 2      | Turbidity                              | NTU   | 1                             | 5                 | <1      | IS : 3025(Pt-10)-1984 (RA 2017)      |
| 3      | pH                                     | -     | 6.5-8.5                       | No Relaxation     | 7.87    | IS : 3025(Pt-11)1983 (RA 2017)       |
| 4      | Total Hardness (as CaCO <sub>3</sub> ) | mg/l  | 200                           | 600               | 322     | IS : 3025(Pt-21) 2009, (RA 2014)     |
| 5      | Iron (as Fe)                           | mg/l  | 1                             | No Relaxation     | 0.11    | 3120B, APHA 23nd Ed., 2017 (ICP-OES) |
| 6      | Chlorides (as Cl)                      | mg/l  | 250                           | 1000              | 87      | IS : 3025(Pt-32)1988 (RA 2014)       |
| 7      | Fluoride (as F)                        | mg/l  | 1                             | 1.5               | 0.8     | 4500F(D), APHA 23nd Ed., 2017        |
| 8      | TDS                                    | mg/l  | 500                           | 2000              | 904     | IS: 3025(Pt-16)1984 (RA 2017)        |
| 9      | Calcium (as Ca <sup>2+</sup> )         | mg/l  | 75                            | 200               | 77      | IS : 3025(Pt-40)1991 (RA 2014)       |
| 10     | Magnesium (as Mg <sup>2+</sup> )       | mg/l  | 30                            | 100               | 31      | IS : 3025(Pt-40)1991 (RA 2014)       |
| 11     | Copper (as Cu)                         | mg/l  | 0.05                          | 1.5               | <0.01   | 3120B, APHA 23nd Ed., 2017 (ICP-OES) |
| 12     | Manganese (as Mn)                      | mg/l  | 0.1                           | 0.3               | <0.01   | 3120B, APHA 23nd Ed., 2017 (ICP-OES) |
| 13     | Sulphate (as SO <sub>4</sub> )         | mg/l  | 200                           | 400               | 93      | IS : 3025(Pt-24)1986 (RA 2014)       |
| 14     | Nitrate (as NO <sub>3</sub> )          | mg/l  | 45                            | No Relaxation     | 9       | IS : 3025(Pt-34)1988 (RA 2014)       |

Rahul Singh (Sr. Chemist)  
Authorized Signatory  
(Seal & Signature)

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## Test Report

Report Code: W20210219-005 (A)

Issue Date: 19.02.2021

|    |                                       |      |       |               |        |  |
|----|---------------------------------------|------|-------|---------------|--------|--|
| 15 | Mercury (as Hg)                       | mg/l | 0.001 | No Relaxation | <0.001 | 3120B, APHA 23nd Ed., 2017 (ICP-OES-VGA) |
| 16 | Cadmium (as Cd)                       | mg/l | 0.003 | No Relaxation | <0.01  | 3120B, APHA 23nd Ed., 2017 (ICP-OES)     |
| 17 | Selenium (as Se)                      | mg/l | 0.01  | No Relaxation | <0.01  | 3120B, APHA 23nd Ed., 2017 (ICP-OES)     |
| 18 | Arsenic (as As)                       | mg/l | 0.01  | 0.05          | <0.01  | 3120B, APHA 23nd Ed., 2017 (ICP-OES-VGA) |
| 19 | Lead (as Pb)                          | mg/l | 0.01  | No Relaxation | <0.01  | 3120B, APHA 23nd Ed., 2017 (ICP-OES)     |
| 20 | Zinc (as Zn)                          | mg/l | 5     | 15            | 0.08   | 3120B, APHA 23nd Ed., 2017 (ICP-OES)     |
| 21 | Total Chromium (as Cr <sup>3+</sup> ) | mg/l | 0.05  | No Relaxation | <0.01  | IS : 3025(Pt-52)2003 (RA 2014)           |
| 22 | Alkalinity (as CaCO <sub>3</sub> )    | mg/l | 200   | 600           | 494    | IS: 3025(Pt-23)1986 (RA 2014)            |
| 23 | Aluminum (as Al)                      | mg/l | 0.03  | 0.2           | <0.01  | 3120B, APHA 23nd Ed., 2017 (ICP-OES)     |
| 24 | Boron (as B)                          | mg/l | 0.5   | 1             | 0.2    | 3120B, APHA 23nd Ed., 2017 (ICP-OES)     |

**\*\* End of Report \*\***

Rahul Singh (Sr. Chemist)  
Authorized Signatory  
(Seal & Signature)

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## Test Report

**Report Code: W20210219-005 (B)**

**Issue Date: 19.02.2021**

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120 KLPD along with 4.0 MW power plant,  
Vill-Jatwar, Tehsil Shahzadpur, Dist. Ambala, Haryana.

**Sample Received on:** 05.02.2021

**Analysis Duration:** 05.02.2021 to 11.02.2021

**Sample Description:** Ground Water

## RESULTS

(Water Quality Analysis)

### SAMPLING DETAILS

**Date of Sampling** : 04.02.2021  
**Sampling Location** : Village Tepla  
**Sample Collected by** : Mr. Rameshwar Kumar  
**Sampling Protocol** : IS-1622: 1981, RA 2003  
**Weather Condition** : Clear Sky  
**Sample Quantity** : 500 mL  
**Sample Packing & Mark** : Glass Bottle & JVS/FEB/GW-05

| S. No.                            | Parameters     | Units     | Limits (as per IS:10500-2012) | Results           | Test Method              |
|-----------------------------------|----------------|-----------|-------------------------------|-------------------|--------------------------|
| <b>Bacteriological Parameters</b> |                |           |                               |                   |                          |
| 1                                 | Total Coliform | MPN/100ml | shall not be detectable       | Not Detected (<2) | IS : 1622-1981 (RA.2003) |
| 2                                 | E. coli        | MPN/100ml | shall not be detectable       | Absent            | IS : 1622-1981 (RA 2003) |

**\*\* End of Report \*\***

Ajay Kumar Sharma (Quality Manager)  
  
Authorized Signatory  
(Seal & Signature)

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**Sample Description:** Ground Water

## RESULTS

(Water Quality Analysis)

### SAMPLING DETAILS

|                                  |                                   |
|----------------------------------|-----------------------------------|
| <b>Date of Sampling</b>          | : 04.02.2021                      |
| <b>Sampling Location</b>         | : Village Tepla                   |
| <b>Sample Collected by</b>       | : Mr. Rameshwar Kumar             |
| <b>Sampling Protocol</b>         | : IS-3025(Pt-1)-1987 RA 2003      |
| <b>Weather Condition</b>         | : Clear Sky                       |
| <b>Sample Quantity</b>           | : 5 L                             |
| <b>Sample Packing &amp; Mark</b> | : Plastic Bottle & JVSB/FEB/GW-05 |

| S. No. | Parameters   | Units | Limits (as per IS:10500-2012) |                   | Results   | Test Method                      |
|--------|--|-------|-------------------------------|-------------------|-----------|----------------------------------|
|        |  |       | Desirable Limit               | Permissible Limit |           |                                  |
| 1      | Odour  | -     | Agreeable                     | Agreeable         | Agreeable | IS : 3025(Pt-5) 1983 (RA 2017)   |
| 2      | Taste  | -     | Agreeable                     | Agreeable         | Agreeable | IS : 3025(Pt-8) 1983 (RA 2017)   |
| 3      | Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH) | mg/l  | 0.001                         | 0.002             | <0.01     | 5530-C, APHA 23nd Ed., 2017      |
| 4      | Cyanide (as CN)  | mg/l  | 0.05                          | No Relaxation     | <0.01     | 4500-CN (E), APHA 23nd Ed., 2017 |
| 5      | Anionic Detergent (as MBAS)                              | mg/l  | 0.2                           | 1                 | <0.01     | 5540-C, APHA 23nd Ed., 2017      |

**\*\* End of Report \*\***

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Authorized Signatory  
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## Test Report

Report Code: W20210219-006 (A)

Issue Date: 19.02.2021

Issued To: Grain based Distillery "M/s JVS Biofuel Pvt Ltd"  
120 KLPD along with 4.0 MW power plant,  
Vill-Jatwar, Tehsil Shahzadpur, Dist. Ambala, Haryana.

Sample Received on: 05.02.2021  
Analysis Duration: 05.02.2021 to 18.02.2021

Sample Description: Ground Water

## RESULTS

(Water Quality Analysis)

### SAMPLING DETAILS

|                       |                                   |
|-----------------------|-----------------------------------|
| Date of Sampling      | : 04.02.2021                      |
| Sampling Location     | : Khanpur Brahaman                |
| Sample Collected by   | : Mr. Rameshwar Kumar             |
| Sampling Protocol     | : IS-3025(Pt-1)-1987 RA 2003      |
| Weather Condition     | : Clear Sky                       |
| Sample Quantity       | : 5 L                             |
| Sample Packing & Mark | : Plastic Bottle & JVSB/FEB/GW-06 |

| S. No. | Parameters                             | Units | Limits (as per IS:10500-2012) |                   | Results | Test Method                          |
|--------|--|-------|-------------------------------|-------------------|---------|--------------------------------------|
|        |  |       | Desirable Limit               | Permissible Limit |         |                                      |
| 1      | Color                                  | Hazen | 5                             | 15                | <5      | IS : 3025(Pt-4) 1983 (RA 2017)       |
| 2      | Turbidity                              | NTU   | 1                             | 5                 | <1      | IS : 3025(Pt-10)-1984 (RA 2017)      |
| 3      | pH                                     | -     | 6.5-8.5                       | No Relaxation     | 7.56    | IS : 3025(Pt-11)1983 (RA 2017)       |
| 4      | Total Hardness (as CaCO <sub>3</sub> ) | mg/l  | 200                           | 600               | 329     | IS : 3025(Pt-21) 2009, (RA 2014)     |
| 5      | Iron (as Fe)                           | mg/l  | 1                             | No Relaxation     | 0.16    | 3120B, APHA 23rd Ed., 2017 (ICP-OES) |
| 6      | Chlorides (as Cl)                      | mg/l  | 250                           | 1000              | 97      | IS : 3025(Pt-32)1988 (RA 2014)       |
| 7      | Fluoride (as F)                        | mg/l  | 1                             | 1.5               | 0.9     | 4500F(D), APHA 23rd Ed., 2017        |
| 8      | TDS                                    | mg/l  | 500                           | 2000              | 891     | IS: 3025(Pt-16)1984 (RA 2017)        |
| 9      | Calcium (as Ca <sup>2+</sup> )         | mg/l  | 75                            | 200               | 79      | IS : 3025(Pt-40)1991 (RA 2014)       |
| 10     | Magnesium (as Mg <sup>2+</sup> )       | mg/l  | 30                            | 100               | 30      | IS : 3025(Pt-40)1991 (RA 2014)       |
| 11     | Copper (as Cu)                         | mg/l  | 0.05                          | 1.5               | <0.01   | 3120B, APHA 23rd Ed., 2017 (ICP-OES) |
| 12     | Manganese (as Mn)                      | mg/l  | 0.1                           | 0.3               | <0.01   | 3120B, APHA 23rd Ed., 2017 (ICP-OES) |
| 13     | Sulphate (as SO <sub>4</sub> )         | mg/l  | 200                           | 400               | 95      | IS : 3025(Pt-24)1986 (RA 2014)       |
| 14     | Nitrate (as NO <sub>3</sub> )          | mg/l  | 45                            | No Relaxation     | 9       | IS : 3025(Pt-34)1988 (RA 2014)       |

Rahul Singh (Sr. Chemist)  
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|    |                                       |      |       |               |        |  |
|----|---------------------------------------|------|-------|---------------|--------|--|
| 15 | Mercury (as Hg)                       | mg/l | 0.001 | No Relaxation | <0.001 | 3120B, APHA 23nd Ed., 2017 (ICP-OES-VGA) |
| 16 | Cadmium (as Cd)                       | mg/l | 0.003 | No Relaxation | <0.01  | 3120B, APHA 23nd Ed., 2017 (ICP-OES)     |
| 17 | Selenium (as Se)                      | mg/l | 0.01  | No Relaxation | <0.01  | 3120B, APHA 23nd Ed., 2017 (ICP-OES)     |
| 18 | Arsenic (as As)                       | mg/l | 0.01  | 0.05          | <0.01  | 3120B, APHA 23nd Ed., 2017 (ICP-OES-VGA) |
| 19 | Lead (as Pb)                          | mg/l | 0.01  | No Relaxation | <0.01  | 3120B, APHA 23nd Ed., 2017 (ICP-OES)     |
| 20 | Zinc (as Zn)                          | mg/l | 5     | 15            | 0.05   | 3120B, APHA 23nd Ed., 2017 (ICP-OES)     |
| 21 | Total Chromium (as Cr <sup>3+</sup> ) | mg/l | 0.05  | No Relaxation | <0.01  | IS : 3025(Pt-52)2003 (RA 2014)           |
| 22 | Alkalinity (as CaCO <sub>3</sub> )    | mg/l | 200   | 600           | 465    | IS: 3025(Pt-23)1986 (RA 2014)            |
| 23 | Aluminum (as Al)                      | mg/l | 0.03  | 0.2           | <0.01  | 3120B, APHA 23nd Ed., 2017 (ICP-OES)     |
| 24 | Boron (as B)                          | mg/l | 0.5   | 1             | 0.1    | 3120B, APHA 23nd Ed., 2017 (ICP-OES)     |

**\*\* End of Report \*\***

Rahul Singh (Sr. Chemist)  
Authorized Signatory  
(Seal & Signature)

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**Sample Received on:** 05.02.2021  
**Analysis Duration:** 05.02.2021 to 11.02.2021

**Sample Description:** Ground Water

## RESULTS

(Water Quality Analysis)

### SAMPLING DETAILS

**Date of Sampling** : 04.02.2021  
**Sampling Location** : Khanpur Brahaman  
**Sample Collected by** : Mr. Rameshwar Kumar  
**Sampling Protocol** : IS-1622: 1981, RA 2003  
**Weather Condition** : Clear Sky  
**Sample Quantity** : 500 mL  
**Sample Packing & Mark** : Glass Bottle & JVSB/FEB/GW-06

| S. No.                            | Parameters     | Units     | Limits (as per IS:10500-2012) | Results           | Test Method              |
|-----------------------------------|----------------|-----------|-------------------------------|-------------------|--------------------------|
| <b>Bacteriological Parameters</b> |                |           |                               |                   |                          |
| 1                                 | Total Coliform | MPN/100ml | shall not be detectable       | Not Detected (<2) | IS : 1622-1981 (RA.2003) |
| 2                                 | E. coli        | MPN/100ml | shall not be detectable       | Absent            | IS : 1622-1981 (RA 2003) |

**\*\* End of Report \*\***

Ajay Kumar Sharma (Quality Manager)  
  
Authorized Signatory  
(Seal & Signature)

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## RESULTS

(Water Quality Analysis)

### SAMPLING DETAILS

|                                  |                                   |
|----------------------------------|-----------------------------------|
| <b>Date of Sampling</b>          | : 04.02.2021                      |
| <b>Sampling Location</b>         | : Khanpur Brahaman                |
| <b>Sample Collected by</b>       | : Mr. Rameshwar Kumar             |
| <b>Sampling Protocol</b>         | : IS-3025(Pt-1)-1987 RA 2003      |
| <b>Weather Condition</b>         | : Clear Sky                       |
| <b>Sample Quantity</b>           | : 5 L                             |
| <b>Sample Packing &amp; Mark</b> | : Plastic Bottle & JVSB/FEB/GW-06 |

| S. No. | Parameters   | Units | Limits (as per IS:10500-2012) |                   | Results   | Test Method                      |
|--------|--|-------|-------------------------------|-------------------|-----------|----------------------------------|
|        |  |       | Desirable Limit               | Permissible Limit |           |                                  |
| 1      | Odour  | -     | Agreeable                     | Agreeable         | Agreeable | IS : 3025(Pt-5) 1983 (RA 2017)   |
| 2      | Taste  | -     | Agreeable                     | Agreeable         | Agreeable | IS : 3025(Pt-8) 1983 (RA 2017)   |
| 3      | Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH) | mg/l  | 0.001                         | 0.002             | <0.01     | 5530-C, APHA 23nd Ed., 2017      |
| 4      | Cyanide (as CN)  | mg/l  | 0.05                          | No Relaxation     | <0.01     | 4500-CN (E), APHA 23nd Ed., 2017 |
| 5      | Anionic Detergent (as MBAS)                              | mg/l  | 0.2                           | 1                 | <0.01     | 5540-C, APHA 23nd Ed., 2017      |

**\*\* End of Report \*\***

Rahul Singh (Sr. Chemist)  
Authorized Signatory  
(Seal & Signature)

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## Test Report

Report Code: W20210219-007 (A)

Issue Date: 19.02.2021

Issued To: Grain based Distillery "M/s JVS Biofuel Pvt Ltd"  
120 KLPD along with 4.0 MW power plant,  
Vill-Jatwar, Tehsil Shahzadpur, Dist. Ambala, Haryana.

Sample Received on: 05.02.2021  
Analysis Duration: 05.02.2021 to 18.02.2021

Sample Description: Ground Water

## RESULTS

(Water Quality Analysis)

### SAMPLING DETAILS

|                       |                                   |
|-----------------------|-----------------------------------|
| Date of Sampling      | : 04.02.2021                      |
| Sampling Location     | : Navan Gaon                      |
| Sample Collected by   | : Mr. Rameshwar Kumar             |
| Sampling Protocol     | : IS-3025(Pt-1)-1987 RA 2003      |
| Weather Condition     | : Clear Sky                       |
| Sample Quantity       | : 5 L                             |
| Sample Packing & Mark | : Plastic Bottle & JVSB/FEB/GW-07 |

| S. No. | Parameters                             | Units | Limits (as per IS:10500-2012) |                   | Results | Test Method                          |
|--------|--|-------|-------------------------------|-------------------|---------|--------------------------------------|
|        |  |       | Desirable Limit               | Permissible Limit |         |                                      |
| 1      | Color                                  | Hazen | 5                             | 15                | <5      | IS : 3025(Pt-4) 1983 (RA 2017)       |
| 2      | Turbidity                              | NTU   | 1                             | 5                 | <1      | IS : 3025(Pt-10)-1984 (RA 2017)      |
| 3      | pH                                     | -     | 6.5-8.5                       | No Relaxation     | 7.51    | IS : 3025(Pt-11)1983 (RA 2017)       |
| 4      | Total Hardness (as CaCO <sub>3</sub> ) | mg/l  | 200                           | 600               | 356     | IS : 3025(Pt-21) 2009, (RA 2014)     |
| 5      | Iron (as Fe)                           | mg/l  | 1                             | No Relaxation     | 0.19    | 3120B, APHA 23rd Ed., 2017 (ICP-OES) |
| 6      | Chlorides (as Cl)                      | mg/l  | 250                           | 1000              | 85      | IS : 3025(Pt-32)1988 (RA 2014)       |
| 7      | Fluoride (as F)                        | mg/l  | 1                             | 1.5               | 0.7     | 4500F(D), APHA 23rd Ed., 2017        |
| 8      | TDS                                    | mg/l  | 500                           | 2000              | 845     | IS: 3025(Pt-16)1984 (RA 2017)        |
| 9      | Calcium (as Ca <sup>2+</sup> )         | mg/l  | 75                            | 200               | 85      | IS : 3025(Pt-40)1991 (RA 2014)       |
| 10     | Magnesium (as Mg <sup>2+</sup> )       | mg/l  | 30                            | 100               | 34      | IS : 3025(Pt-40)1991 (RA 2014)       |
| 11     | Copper (as Cu)                         | mg/l  | 0.05                          | 1.5               | <0.01   | 3120B, APHA 23rd Ed., 2017 (ICP-OES) |
| 12     | Manganese (as Mn)                      | mg/l  | 0.1                           | 0.3               | <0.01   | 3120B, APHA 23rd Ed., 2017 (ICP-OES) |
| 13     | Sulphate (as SO <sub>4</sub> )         | mg/l  | 200                           | 400               | 112     | IS : 3025(Pt-24)1986 (RA 2014)       |
| 14     | Nitrate (as NO <sub>3</sub> )          | mg/l  | 45                            | No Relaxation     | 7       | IS : 3025(Pt-34)1988 (RA 2014)       |

Rahul Singh (Sr. Chemist)  
Authorized Signatory  
(Seal & Signature)

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## Test Report

Report Code: W20210219-007 (A)

Issue Date: 19.02.2021

|    |                                       |      |       |               |        |  |
|----|---------------------------------------|------|-------|---------------|--------|--|
| 15 | Mercury (as Hg)                       | mg/l | 0.001 | No Relaxation | <0.001 | 3120B, APHA 23nd Ed., 2017 (ICP-OES-VGA) |
| 16 | Cadmium (as Cd)                       | mg/l | 0.003 | No Relaxation | <0.01  | 3120B, APHA 23nd Ed., 2017 (ICP-OES)     |
| 17 | Selenium (as Se)                      | mg/l | 0.01  | No Relaxation | <0.01  | 3120B, APHA 23nd Ed., 2017 (ICP-OES)     |
| 18 | Arsenic (as As)                       | mg/l | 0.01  | 0.05          | <0.01  | 3120B, APHA 23nd Ed., 2017 (ICP-OES-VGA) |
| 19 | Lead (as Pb)                          | mg/l | 0.01  | No Relaxation | <0.01  | 3120B, APHA 23nd Ed., 2017 (ICP-OES)     |
| 20 | Zinc (as Zn)                          | mg/l | 5     | 15            | 0.06   | 3120B, APHA 23nd Ed., 2017 (ICP-OES)     |
| 21 | Total Chromium (as Cr <sup>3+</sup> ) | mg/l | 0.05  | No Relaxation | <0.01  | IS : 3025(Pt-52)2003 (RA 2014)           |
| 22 | Alkalinity (as CaCO <sub>3</sub> )    | mg/l | 200   | 600           | 417    | IS: 3025(Pt-23)1986 (RA 2014)            |
| 23 | Aluminum (as Al)                      | mg/l | 0.03  | 0.2           | <0.01  | 3120B, APHA 23nd Ed., 2017 (ICP-OES)     |
| 24 | Boron (as B)                          | mg/l | 0.5   | 1             | 0.2    | 3120B, APHA 23nd Ed., 2017 (ICP-OES)     |

**\*\* End of Report \*\***

Rahul Singh (Sr. Chemist)  
Authorized Signatory  
(Seal & Signature)

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## Test Report

**Report Code: W20210219-007 (B)**

**Issue Date: 19.02.2021**

**Issued To:** Grain based Distillery "M/s JVS Biofuel Pvt Ltd"  
120 KLPD along with 4.0 MW power plant,  
Vill-Jatwar, Tehsil Shahzadpur, Dist. Ambala, Haryana.

**Sample Received on:** 05.02.2021  
**Analysis Duration:** 05.02.2021 to 11.02.2021

**Sample Description:** Ground Water

## RESULTS

(Water Quality Analysis)

### SAMPLING DETAILS

**Date of Sampling** : 04.02.2021  
**Sampling Location** : Navan Gaon  
**Sample Collected by** : Mr. Rameshwar Kumar  
**Sampling Protocol** : IS-1622: 1981, RA 2003  
**Weather Condition** : Clear Sky  
**Sample Quantity** : 500 mL  
**Sample Packing & Mark** : Glass Bottle & JVSB/FEB/GW-07

| S. No.                            | Parameters     | Units     | Limits (as per IS:10500-2012) | Results           | Test Method              |
|-----------------------------------|----------------|-----------|-------------------------------|-------------------|--------------------------|
| <b>Bacteriological Parameters</b> |                |           |                               |                   |                          |
| 1                                 | Total Coliform | MPN/100ml | shall not be detectable       | Not Detected (<2) | IS : 1622-1981 (RA.2003) |
| 2                                 | E. coli        | MPN/100ml | shall not be detectable       | Absent            | IS : 1622-1981 (RA 2003) |

**\*\* End of Report \*\***

Ajay Kumar Sharma (Quality Manager)  
  
Authorized Signatory  
(Seal & Signature)

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**Issue Date: 19.02.2021**

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120 KLPD along with 4.0 MW power plant,  
Vill-Jatwar, Tehsil Shahzadpur, Dist. Ambala, Haryana.

**Sample Received on:** 05.02.2021  
**Analysis Duration:** 05.02.2021 to 18.02.2021

**Sample Description:** Ground Water

## RESULTS

(Water Quality Analysis)

### SAMPLING DETAILS

|                                  |                                   |
|----------------------------------|-----------------------------------|
| <b>Date of Sampling</b>          | : 04.02.2021                      |
| <b>Sampling Location</b>         | : Navan Gaon                      |
| <b>Sample Collected by</b>       | : Mr. Rameshwar Kumar             |
| <b>Sampling Protocol</b>         | : IS-3025(Pt-1)-1987 RA 2003      |
| <b>Weather Condition</b>         | : Clear Sky                       |
| <b>Sample Quantity</b>           | : 5 L                             |
| <b>Sample Packing &amp; Mark</b> | : Plastic Bottle & JVSB/FEB/GW-07 |

| S. No. | Parameters   | Units | Limits (as per IS:10500-2012) |                   | Results   | Test Method                      |
|--------|--|-------|-------------------------------|-------------------|-----------|----------------------------------|
|        |  |       | Desirable Limit               | Permissible Limit |           |                                  |
| 1      | Odour  | -     | Agreeable                     | Agreeable         | Agreeable | IS : 3025(Pt-5) 1983 (RA 2017)   |
| 2      | Taste  | -     | Agreeable                     | Agreeable         | Agreeable | IS : 3025(Pt-8) 1983 (RA 2017)   |
| 3      | Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH) | mg/l  | 0.001                         | 0.002             | <0.01     | 5530-C, APHA 23nd Ed., 2017      |
| 4      | Cyanide (as CN)  | mg/l  | 0.05                          | No Relaxation     | <0.01     | 4500-CN (E), APHA 23nd Ed., 2017 |
| 5      | Anionic Detergent (as MBAS)                              | mg/l  | 0.2                           | 1                 | <0.01     | 5540-C, APHA 23nd Ed., 2017      |

**\*\* End of Report \*\***

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Authorized Signatory  
(Seal & Signature)

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## Test Report

Report Code: W20210219-008 (A)

Issue Date: 19.02.2021

Issued To: Grain based Distillery "M/s JVS Biofuel Pvt Ltd"  
120 KLPD along with 4.0 MW power plant,  
Vill-Jatwar, Tehsil Shahzadpur, Dist. Ambala, Haryana.

Sample Description: Ground Water

Sample Received on: 05.02.2021

Analysis Duration: 05.02.2021 to 18.02.2021

## RESULTS

(Water Quality Analysis)

### SAMPLING DETAILS

|                       |                                   |
|-----------------------|-----------------------------------|
| Date of Sampling      | : 04.02.2021                      |
| Sampling Location     | : Village Berpura                 |
| Sample Collected by   | : Mr. Rameshwar Kumar             |
| Sampling Protocol     | : IS-3025(Pt-1)-1987 RA 2003      |
| Weather Condition     | : Clear Sky                       |
| Sample Quantity       | : 5 L                             |
| Sample Packing & Mark | : Plastic Bottle & JVSB/FEB/GW-08 |

| S. No. | Parameters                             | Units | Limits (as per IS:10500-2012) |                   | Results | Test Method                          |
|--------|--|-------|-------------------------------|-------------------|---------|--------------------------------------|
|        |  |       | Desirable Limit               | Permissible Limit |         |                                      |
| 1      | Color                                  | Hazen | 5                             | 15                | <5      | IS : 3025(Pt-4) 1983 (RA 2017)       |
| 2      | Turbidity                              | NTU   | 1                             | 5                 | <1      | IS : 3025(Pt-10)-1984 (RA 2017)      |
| 3      | pH                                     | -     | 6.5-8.5                       | No Relaxation     | 7.54    | IS : 3025(Pt-11)1983 (RA 2017)       |
| 4      | Total Hardness (as CaCO <sub>3</sub> ) | mg/l  | 200                           | 600               | 365     | IS : 3025(Pt-21) 2009, (RA 2014)     |
| 5      | Iron (as Fe)                           | mg/l  | 1                             | No Relaxation     | 0.11    | 3120B, APHA 23rd Ed., 2017 (ICP-OES) |
| 6      | Chlorides (as Cl)                      | mg/l  | 250                           | 1000              | 92      | IS : 3025(Pt-32)1988 (RA 2014)       |
| 7      | Fluoride (as F)                        | mg/l  | 1                             | 1.5               | 0.6     | 4500F(D), APHA 23rd Ed., 2017        |
| 8      | TDS                                    | mg/l  | 500                           | 2000              | 750     | IS: 3025(Pt-16)1984 (RA 2017)        |
| 9      | Calcium (as Ca <sup>2+</sup> )         | mg/l  | 75                            | 200               | 88      | IS : 3025(Pt-40)1991 (RA 2014)       |
| 10     | Magnesium (as Mg <sup>2+</sup> )       | mg/l  | 30                            | 100               | 35      | IS : 3025(Pt-40)1991 (RA 2014)       |
| 11     | Copper (as Cu)                         | mg/l  | 0.05                          | 1.5               | <0.01   | 3120B, APHA 23rd Ed., 2017 (ICP-OES) |
| 12     | Manganese (as Mn)                      | mg/l  | 0.1                           | 0.3               | <0.01   | 3120B, APHA 23rd Ed., 2017 (ICP-OES) |
| 13     | Sulphate (as SO <sub>4</sub> )         | mg/l  | 200                           | 400               | 119     | IS : 3025(Pt-24)1986 (RA 2014)       |
| 14     | Nitrate (as NO <sub>3</sub> )          | mg/l  | 45                            | No Relaxation     | 8       | IS : 3025(Pt-34)1988 (RA 2014)       |

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## Test Report

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Issue Date: 19.02.2021

|    |                                       |      |       |               |        |  |
|----|---------------------------------------|------|-------|---------------|--------|--|
| 15 | Mercury (as Hg)                       | mg/l | 0.001 | No Relaxation | <0.001 | 3120B, APHA 23nd Ed., 2017 (ICP-OES-VGA) |
| 16 | Cadmium (as Cd)                       | mg/l | 0.003 | No Relaxation | <0.01  | 3120B, APHA 23nd Ed., 2017 (ICP-OES)     |
| 17 | Selenium (as Se)                      | mg/l | 0.01  | No Relaxation | <0.01  | 3120B, APHA 23nd Ed., 2017 (ICP-OES)     |
| 18 | Arsenic (as As)                       | mg/l | 0.01  | 0.05          | <0.01  | 3120B, APHA 23nd Ed., 2017 (ICP-OES-VGA) |
| 19 | Lead (as Pb)                          | mg/l | 0.01  | No Relaxation | <0.01  | 3120B, APHA 23nd Ed., 2017 (ICP-OES)     |
| 20 | Zinc (as Zn)                          | mg/l | 5     | 15            | 0.07   | 3120B, APHA 23nd Ed., 2017 (ICP-OES)     |
| 21 | Total Chromium (as Cr <sup>3+</sup> ) | mg/l | 0.05  | No Relaxation | <0.01  | IS : 3025(Pt-52)2003 (RA 2014)           |
| 22 | Alkalinity (as CaCO <sub>3</sub> )    | mg/l | 200   | 600           | 315    | IS: 3025(Pt-23)1986 (RA 2014)            |
| 23 | Aluminum (as Al)                      | mg/l | 0.03  | 0.2           | <0.01  | 3120B, APHA 23nd Ed., 2017 (ICP-OES)     |
| 24 | Boron (as B)                          | mg/l | 0.5   | 1             | 0.2    | 3120B, APHA 23nd Ed., 2017 (ICP-OES)     |

**\*\* End of Report \*\***

Rahul Singh (Sr. Chemist)  
Authorized Signatory  
(Seal & Signature)

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120 KLPD along with 4.0 MW power plant,  
Vill-Jatwar, Tehsil Shahzadpur, Dist. Ambala, Haryana.

**Sample Received on:** 05.02.2021

**Analysis Duration:** 05.02.2021 to 11.02.2021

**Sample Description:** Ground Water

## RESULTS

(Water Quality Analysis)

### SAMPLING DETAILS

**Date of Sampling** : 04.02.2021  
**Sampling Location** : Village Berpura  
**Sample Collected by** : Mr. Rameshwar Kumar  
**Sampling Protocol** : IS-1622: 1981, RA 2003  
**Weather Condition** : Clear Sky  
**Sample Quantity** : 500 mL  
**Sample Packing & Mark** : Glass Bottle & JVSB/FEB/GW-08

| S. No.                            | Parameters     | Units     | Limits (as per IS:10500-2012) | Results           | Test Method              |
|-----------------------------------|----------------|-----------|-------------------------------|-------------------|--------------------------|
| <b>Bacteriological Parameters</b> |                |           |                               |                   |                          |
| 1                                 | Total Coliform | MPN/100ml | shall not be detectable       | Not Detected (<2) | IS : 1622-1981 (RA.2003) |
| 2                                 | E. coli        | MPN/100ml | shall not be detectable       | Absent            | IS : 1622-1981 (RA 2003) |

**\*\* End of Report \*\***

Ajay Kumar Sharma (Quality Manager)  
  
Authorized Signatory  
(Seal & Signature)

Note: 1.The results indicated only refer to the tested samples and listed parameters and do not endorse any product  
2. This certificate shall not be reproduced wholly or in part without prior written consent of the laboratory.  
3. This certificate shall not be used in any advertising media or as evidence in the court of Law without prior written consent of the laboratory  
4. The samples received shall be destroyed after 30 days from the date of issue of the certificate unless specified otherwise and sample for biological testing will be destroyed after one week of testing.



# GRC INDIA TRAINING & ANALYTICAL LABORATORY

(A unit of Grass Roots Research & Creation India (P) Ltd.)

An ISO 9001: 2015, ISO 14001: 2015&ISO45001: 2018 (OH&S) Certified Lab.

Recognized by Ministry of Environment, Forest & Climate Change (MoEF&CC, GOI) under the E (P) Act, 1986

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## Test Report

**Report Code: W20210219-008 (B)**

**Issue Date: 19.02.2021**

**Issued To:** Grain based Distillery "M/s JVS Biofuel Pvt Ltd"  
120 KLPD along with 4.0 MW power plant,  
Vill-Jatwar, Tehsil Shahzadpur, Dist. Ambala, Haryana.

**Sample Received on:** 05.02.2021  
**Analysis Duration:** 05.02.2021 to 18.02.2021

**Sample Description:** Ground Water

## RESULTS

(Water Quality Analysis)

### SAMPLING DETAILS

|                                  |                                   |
|----------------------------------|-----------------------------------|
| <b>Date of Sampling</b>          | : 04.02.2021                      |
| <b>Sampling Location</b>         | : Village Berpura                 |
| <b>Sample Collected by</b>       | : Mr. Rameshwar Kumar             |
| <b>Sampling Protocol</b>         | : IS-3025(Pt-1)-1987 RA 2003      |
| <b>Weather Condition</b>         | : Clear Sky                       |
| <b>Sample Quantity</b>           | : 5 L                             |
| <b>Sample Packing &amp; Mark</b> | : Plastic Bottle & JVSB/FEB/GW-08 |

| S. No. | Parameters   | Units | Limits (as per IS:10500-2012) |                   | Results   | Test Method                      |
|--------|--|-------|-------------------------------|-------------------|-----------|----------------------------------|
|        |  |       | Desirable Limit               | Permissible Limit |           |                                  |
| 1      | Odour  | -     | Agreeable                     | Agreeable         | Agreeable | IS : 3025(Pt-5) 1983 (RA 2017)   |
| 2      | Taste  | -     | Agreeable                     | Agreeable         | Agreeable | IS : 3025(Pt-8) 1983 (RA 2017)   |
| 3      | Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH) | mg/l  | 0.001                         | 0.002             | <0.01     | 5530-C, APHA 23nd Ed., 2017      |
| 4      | Cyanide (as CN)  | mg/l  | 0.05                          | No Relaxation     | <0.01     | 4500-CN (E), APHA 23nd Ed., 2017 |
| 5      | Anionic Detergent (as MBAS)                              | mg/l  | 0.2                           | 1                 | <0.01     | 5540-C, APHA 23nd Ed., 2017      |

**\*\* End of Report \*\***

Rahul Singh (Sr. Chemist)  
Authorized Signatory  
(Seal & Signature)

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