

PRE-FEASIBILITY REPORT

FOR

INSTALLATION OF CO₂ PLANT

WITHIN EXISTING GRAIN BASED DISTILLERY PROJECT

AT :

INDUSTRIAL PARK MOTIPUR,

DAMODARPUR (MURARPUR); BARURAJ

DIST. MUZAFFARPUR (BIHAR)

OF



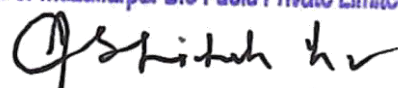
MUZAFFARPUR BIO FUELS PRIVATE LIMITED

SHIV KUNJ, MADNANI LANE

MITHANPURA

MUZAFFARPUR - 842 002 (BIHAR)

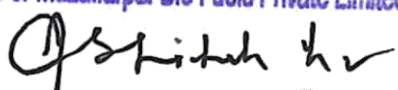
For Muzaffarpur Bio Fuels Private Limited



Director

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For Muzaffarpur Bio Fuels Private Limited

Director

1.0 INTRODUCTION

Muzaffarpur Bio Fuel Pvt. Ltd. (MBPL) is registered under The Companies Act' 2013 vide CIN No. U24299BR2021PTC051696 Dt: 16th Apr.'2021. Registered Office of MBPL is at Madnani Lane, Near Pramanand Lodge, Mithanpura, Muzaffarpur- 842002, State Bihar. Bihar Industrial Area Development Authority (BIADA), Industry Deptt., Govt. of Bihar has allotted 8.09 Ha. (20 Acres / 871200 Sqft.) of land, at Plot No. 26(P), Part A, Industrial Park Motipur, Damodarpur (Murarpur) in Muzaffarpur District of Bihar State, vide Memo No. 927 Dt: 30.07.2021

As per EBP Program of Govt. of India, MBPL, has established and is operating 110 KLD Grain Based Distillery with 3 MW Cogeneration Plant, after obtaining EC from MoEFCC Govt. of India vide EC identification No. EC21A060BR173786 Dt: 08.10.2021. CTE has been granted vide Memo No. 1272 Dt: 10.09.2021 and CCA (CTO) has been granted vide Ref. No. 970 Dt: 09.06.2023 by BSPCB, which is valid upto 31.03.2028. MBPL has obtained NOC from CGWB vide NOC No. CGWA/NOC/IND/ORIG/2021/12852 Dt: 13.09.2021 which is valid upto 12.09.2024. PESO has granted License for storage under Petroleum Class 'A' vide License No. P/HQ/BI/15/1901(P539104) Dt: 18th May'2023.

Manufacturing and Production Details ;

Manufacturing Facilities	Product	Production Capacity
Distillery	Ethanol	110 KLPD
Power Co-generation	Power	3 MW
Dryer Section	DDGS	46 TPD

Raw Material Requirement & Source ;

S. No.	Particular	Requirements	Source	Mode of Transportation
1.	Grain (MT/day)	Broken Rice : 253 TPD Maize : 287 TPD	Bulk Supplier from all over Bihar	Through closed trucks by existing Road Network
2.	Fresh Water (KLPD)	375	Borewell	Pipeline
3.	Electricity	2800 KWh	Own	---
4.	Fuel			
	Bagasse	202 - 220 TPD	Sugar Mills of North Bihar	Through closed / covered trucks by existing Road Network
	Rice husk	137 – 154 TPD	Rice Mill	

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			from all over Bihar	
	Coal (as auxillary Fuel)	105 - 121 TPD	Ramgarh, Jharkhand	
5.	Enzymes -Alpha Amylase (1-4) -Amyloglucosidase(1-6)	83 Kg/day 110 Kg/day	From Suppliers at Kolkata	Through closed / covered trucks by existing Road Network
6.	Chemicals			
	Sulphuric Acid	71 Kg /day	From Suppliers at Kolkata	Through closed / covered trucks by existing Road Network
	Sodium Hydroxide	93 Kg /day		
	NH ₂ -CO-NH ₂ (Nutrients)	83 Kg /day		
	Antifoam Agent	137 Kg /day		
	Dry Yeast	1 Kg/KL of spirit production		

2.0 Installation of CO₂ Plant ;

MBPL has not proposed to install CO₂ plant alongwith their project, considering it as non-viable option due to non-availability of purchaser in the region. During the EAC meeting the committee asked to submit an undertaking to install CO₂ plant in order to grant EC.

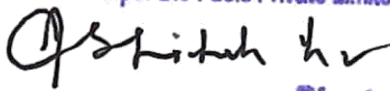
However, as per Specific condition of EC, MBPL has placed order for installation of 90 TPD CO₂ Plant to M/s Medas EngDesign Pvt. Ltd. vide Purchase Order No. MBFPL/DEC23/005 on 05th Dec.'2023, which is a part of EC compliance. This is not a compulsory condition of the EC.

However, till date supplier has not initiated the installation of CO₂ plant, and as per their letter Dt: 24th May'2024, they have assured that commissioning of CO₂ plant will be done within next 5 to 6 months. Supplier has accounted the delay in installation due to dependency on their vendors for supply of raw materials.

3.0 FEASIBILITY OF CO₂ UTILIZATION PLANT ;

During the course of time, MBPL has surveyed the market for assessing the potential buyers of CO₂ in dry form or gaseous form or liquid form, findings of which are as under ;

1. The only product that can be made from carbon dioxide currently is dry ice or it can be utilized in soft drink plants to add carbonation, and also that there is not much demand for the same, to justify even a small part of the current distilleries or the new ones

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which are established, to convert the carbon dioxide into dry ice and successfully find a market for the same

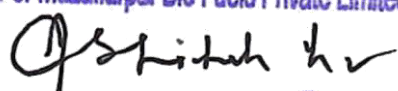
2. In Bihar there are only two plants of soft drink manufacturers and their requirement is being fulfilled by their existing suppliers. There is no new demand in Bihar
3. There is no major buyer in Bihar as well as nearby states viz., Jharkhand, U.P., West Bengal etc., to be considered as prospective buyer.
4. The estimated investment required for installing a CO₂ plant is approximately Rs 5 to 6 crores. Given the low return on investment, this expenditure cannot be justified, especially in light of other pressing financial commitments.
5. For utilization of CO₂, R & D activities are going on in India as well as other parts of world for various alternatives viz., Conversion to Methane, production of Fertilizer – Ammonium dihydrogen phosphate (NH₄H₂PO₄) & Fuel Cells to be utilized as production of renewable energy .
6. NTPC Vindhyachal is in the process of setting up a CO₂ to Methane conversion plant, showcasing a promising alternative for utilizing CO₂ effectively.

4.0 Conclusion ;

From the above mentioned facts and figures, it can be concluded that, installation of CO₂ plant with a huge investment of around Rs. 5-6 Crores will not be financially viable option. Till date, no distillery (molasses based) in the region has installed CO₂ plant.

However, should the any one of CO₂ utilization technology prove successful, MBPL will certainly explore its potential to integrate the same in its operations to enhance environmental sustainability. Hence this condition will be amended accordingly.

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