Office copy

DCM SHRIRAM
SUGAR

Ref: DCM/DIST/EHS/24-25/136 Date 07.09.2024

To
The Chief Environmental Officer (**Circle-5**)
Uttar Pradesh Pollution Control Board,
TC-12, Vibhuti Khand, Gomti Nagar
Lucknow, 226010

Sub: Submission of Environmental Statement for M/s DCM Shriram Ltd., Distillery Unit., Ajbapur, Lakhimpur Kheri, UP

Dear Sir,

Reference to the Consolidated Consent to Operate and Authorization hereinafter referred to as the CCA (Consolidated Consent & authorization) for Air & Water Ref No. 194380/ UPPCB/ Lucknow (UPPCBRO)/ CTO/ both/ LAKHIMPUR KHIRI/ 2023 dated 28/11/2023 for the Consolidated Consent to Operate and Authorisation hereinafter referred to as the CCA (Consolidated Consent & authorization) (Fresh) under Section-25 of the Water (Prevention & Control of Pollution) Act, 1974 and under Section-21 of the Air (Prevention & Control of Pollution) Act, 1981 and Authorization under Rule-6(2) of the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 notified under Environment (Protection) Act, 1986 as applicable (to be referred hereinafter as Water Act, Air Act and HW Rules respectively)

Please find attached here with the Environment Statement in Form-V for the FY 2023-24 as per the Environmental (protection) Rules 1986.

Hope you will find the same in order.

Thanking you,

For DCM Shriram Ltd, Distillery Unit, Ajbapur

(Kuldip Singh)
Sr. Vice President & Unit Head

Encl: - Environment Statement

डाक प्राप्ति रसीद
प्राप्ति दिनांक 13/9/24
प्राप्तकर्ता के हस्ताक्षर
उ०प्र० प्रदूषण नियंत्रण बोर्ड, लखनऊ

CC:-

- The Regional Officer U.P. Pollution Control Board PICUP Bhawan, 4th floor, B Bolck, Vibhuti Khand, Gomti Nagar, Lucknow 226010

13-9-24

ENVIRONMENTAL STATEMENT

FOR

THE FINANCIAL YEAR – 2023 - 24

FOR

DCM SHRIRAM
SUGAR

DCM SHRIRAM LTD.
DISTILLERY UNIT-AJBAPUR

VILL.-AJBAPUR, PO.-MULLAPUR
DISTT. – LAKHIMPUR KHERI, UP

ENVIRONMENTAL AUDIT TEAM

Mr. Ajay Kapoor
Mr. A. K. Arya
Mr. R.N.Thakur
Mr. Dhiraj Kumar Yadav

CONTENT

GOVERNMENT OF INDIA

MINISTRY OF ENVIRONMENT AND FOREST AND CLIMATE CHANGE

Notification No G.S.R. 95 (E) dated February 12, 1992 published in the Gazette of India, Extra – ordinary part II Section 3 (i) dated 12th February 1992, page 2 (No. Q-14011 (i) 90-CPA)

In exercise of the powers conferred by Section 6 and 25 of the ENVIRONMENT (PROTECTION) ACT 1986 (29 OF 1986) THE CENTRAL GOVERNMENT hereby makes the following rules further to amend the ENVIRONMENT (PROTECTION) RULES, 1986, namely: -

1. (i) These rules may be called the ENVIRONMENT (PROTECTION) (Amendment) Rules, 1992
   (ii) They shall come into force on the date of their publication in the Official Gazette
2. In rules 3 of the ENVIRONMENT (PROTECTION) Rules, 1986 after sub-rule (5), the following sub-rule shall be added, namely: -

- Notwithstanding anything contained in sub rule (3), an industry, operation process which has commenced production on or before 16th May, 1981 and has shown adequate proof of at least commencement of physical work for establishment of facilities to meet the specified standards within a time bound program, to the satisfaction of the concerned State Pollution Control Board, shall comply with such standards latest by the 30th day of September 1993.
- Notwithstanding anything contained in sub rule (3) or sub-rule (6), an Industry, Operation or Process which has commenced production after the 16th day of May, 1991 but before the 31st day of December, 1991 and has shown adequate proof of facilities to meet the specified standard within a time bound program, to the satisfaction of the concerned State Pollution Control Board, shall comply with such standard latest by 31st day of December 1992.

GOVERNMENT OF INDIA

MINISTRY OF ENVIRONMENT AND FOREST

NOTIFICATION

No. G.S.R 329 (E), dated March 13, 1992, published in the Gazette of India, Extraordinary part II, Section 3 (i), dated 13th March 1992, Sl. No. 120, Page 3 & 4 (F. No. Q- 415015/1/90-CPA)

In exercise of the powers conferred by sections 6 and 25 of the ENVIRONMENT (PROTECTION) ACT 1986 (29 of 1986), the Central Government hereby makes the following rules further to amend the ENVIRONMENT (PROTECTION) Rules, 1986, namely: -

1. (i) These rules may be called the Environment (Protection) (Second Amendment) Rules , 1992 .
   (ii) They shall come into force on the date of their publication in the Official Gazette.
2. In the Environment (Protection) Rules, 1986, after 13 the following rules shall be inserted namely: -

14. SUBMISSION OF ENVIRONMENT AUDIT REPORT:

Every person carrying on an industry, operation or process requiring consent under Section 25 of the Water (Prevention and Control of Pollution) Act, 1974 (6 of 1974) or under section 21 of the Air (Prevention and Control of Pollution) Act, 1981 (14 of 1981) or both or authorization under the Hazardous Wastes (Management and Handling) Rules, 1989 issued under the Environment (Protection) Act, 1986 (29 of 1986) shall submit an environmental audit report for the financial year ending the 31st March in Form V to the concerned State Pollution Control Board on or before the [thirtieth day of September] every year, beginning 1993.]

PART II SECTION 3, SUBSECTION (I)

GOVERNMENT OF INDIA

MINISTRY OF ENVIRONMENT AND FOREST

NOTIFICATION

(No C.S.R.329 (E)

In exercise of the powers conferred by section 6 and 25 of the ENVIRONMENT (PROTECTION) ACT 1986 (29 of 1986) The Central Government hereby makes the following rules further to amend the ENVIRONMENT (PROTECTION) Rules, 1986, namely: -

1. (i) These rules may be called the Environment (Protection) (Amendment) Rules, 1993

   (ii) They shall come into force on the date of their publication in the Official Gazette

2. In the ENVIRONMENT (PROTECTION) Rules, 1986,

   a) In Rules 14

      (i) For the word Audit Report whenever they occur the word Statement shall be substituted.

      (ii) For the figure letters and word "15th Day of May" the word "THIRTIETH day of SEPTEMBER" shall be substituted.

   b) In appendix "A" for From –V, the following from shall be substituted, namely: -

FORM V

(SEE RULE – 14)

ENVIRONMENTAL STATEMENT

FOR FY – 2023-24

For the period 01.04.2023 to 31.03.2024

DCM SHRIRAM LTD.
DISTILLERY UNIT-AJBAPUR

VILL.-AJBAPUR, PO.-MULLAPUR
DISTT.- LAKHIMPUR KHERI, UP

PART- A

I) NAME AND ADDRESS OF OWNER / OCCUPIER OF INDUSTRY OPERATION OR PROCESS	Mr. K K Sharma Whole Time Director EHS DCM SHRIRAM LTD. DISTILLERY UNIT - AJBAPUR VILL. - AJABAPUR, P.O. - MULLAPUR DISTT - LAKHIMPUR KHERI (U.P.) PIN 261505
II) INDUSTRY CATEGORY	Distillery (Red category)
III) PRODUCTION CAPACITY	500 KLD Multi feed distillery based on (B Heavy Molasses/Cane Juice Syrup/Grain) & 425 KLD on feed stock C heavy molasses along with Co generation power plant Capacity -12 MW.
IV) YEAR OF ESTABLISHMENT	Dec 2019
V) DATE OF LAST ENVIRONMENT STATEMENT SUBMITTED	18.09.2023

PART- B

WATER AND RAW MATERIAL CONSUMPTION

TOTAL INDUSTRIAL WATER CONSUMPTION:

FOR INDUSTRIAL	1674 M3 / Day
FOR DOMESTIC	21.2 M3 / Day

NAME OF PRODUCT:	**PROCESS WATER CONSUMPTION PER UNIT PRODUCT OUTPUT**	
	DURING FINANCIAL YEAR 2022-23	**DURING FINANCIAL YEAR 2023-24**
Ethanol	6.5 KL / KL of Ethanol	5.79 KL / KL of Ethanol

RAW MATERIAL CONSUMPTION

NAME OF RAW MATERIAL	**NAME OF PRODUCT**	**CONSUMPTION OF RAW MATERIAL PER UNIT OF OUTPUT**	
		DURING FINANCIAL YEAR 2022-23	**DURING FINANCIAL YEAR 2023-24**
B heavy Molasses (MT / KL of Product)	Ethanol	3.59	4.38
C heavy Molasses (MT/KL of product)	Ethanol		3.39
Grain (MT/KL of product)	Ethanol		2.20
Sugar juice Syrup (MT/KL of product)	Ethanol		00

PART- C

POLLUTANTS DISCHARGED TO ENVIRONMENT PER UNIT OF OUTPUT

(PARAMETERS AS PER ANALYSIS REPORT OF THE THIRD PARTY MONITORING REPORT)

POLLUTANTS	MAXIMUM QUANTITY OF POLLUTANTS IN DISCHARGE (Mass / Day)	CONCENTRATION POLLUTANTS IN DISCHARGE (Mass / Volume)	PERCENT VARIATION FROM PRESC. STANDARD WITH REASON
AIR			
Stack of Slop Fire Boiler			
PM	NA	42.34 mg/ Nm^3	84.68% Below limit

NOTE: 1) Total water is treated and recycled reused in the plant because our unit is 100% ZLD.

NOTE: 1) MONITORING HAS BEEN CONDUCTED BY NABL APPROOVED LABORATORY.

PART –D

HAZARDOUS WASTE

{AS SPECIFIED UNDER HAZARDOUS WASTES (MANAGEMENT) AND HANDLING RULES 1989}

HAZARDOUS WASTES		TOTAL QUANTITY DURING FINANCIAL YEAR 2023-24 (From 01.04.203 to 31.03 2024)	
a) FROM PROCESS			
i)	**Empty barrels/ containers/ Liners contaminated with hazardous Chemical/ waste**	:	250 Nos/Year
ii)	**Contaminated oil rags or other Cleaning material**	:	00 Ton / Year
	Spent ion exchange containing toxic metal)	:	00 Ton/Year
iii)	**Used or spent oil**	:	00 Ton/Year
b) FROM POLLUTION CONTROL FACILITIES :			
i)	**ETP Sludge**	:	4.485 MT/Year
c) FROM ELECTRICAL PROCESS:			
i)	**E - Waste**	:	0.056 MT/Year

PART – E

SOLID WASTES

SOLID WASTES	TOTAL QUANTITY DURING FINANCIAL YEAR 2022-23	TOTAL QUANTITY DURING FINANCIAL YEAR 2023-24	MODE OF DISPOSAL
A., FROM PROCESS			
Yeast Sludge	8327 MT	4640 MT	As Manure used in agriculture
Boiler Ash	19739 MT	13333 MT	Given to the authorized vendors for further processing as granules and used as manure/ fertilizer. It is Potash rich which is a nutrient for soil. It is handled & disposed in Eco Friendly manner so that there is no impact on Water/ Air/ Soil.
B. FROM POLLUTION CONTROL FACILITIES			
Biological Sludge from CPU	385 MT	435 MT	As Manure used in agriculture

C. (1) Quantity recycled or re-utilized within the unit

Yeast Sludge & Biological Sludge are used in manure formation.

(2) Sold

Boiler Ash	19739 MT	13333 MT	Given to the authorized vendors for further processing as granules and used as manure/ fertilizer. It is Potash rich which is a nutrient for soil. It is handled & disposed in Eco Friendly manner so that there is no impact on Water/ Air/ Soil.
(3) Disposed	**NA**	**NIL**	

PART- F

PLEASE SPECIFY THE CHARACTERISATION (IN TERMS OF COMPOSITION 'AND QUANTUM) OF HAZARDOUS AS WELL AS SOLID WASTES AND INDICATE 'DISPOSAL PRACTICES ADOPTED FOR BOTH CATEGORIES OF WASTES

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1. **SLOPE AND BAGASSE ASH :**

The fibrous residue of the Sugar mill is known as bagasse. It is generated after extraction of juice from cane. Bagasse % in cane normally varies from 28% to 35 %. Bagasse is used as fuel in distilleries in India. It is neither toxic nor hazardous in nature. Similarly bagasse ash (about 1.5 %- 2.0%) is disposed of as landfill.

The spent wash which is waste material in distillery is concentrated in MEE plants. The concentrated spent wash is known as Slope. It is having 55 -60 % of solid content, which is used as fuel in slope fired boiler in distillery.

2. **YEAST SLUDGE:**

In the clarification process of fermented wash, when fermented wash separated through conical separator and through decanter machines, the creamy solid mass obtained therein is known as Yeast sludge. It varies from 1.8 to 2.5 % on fermented wash. During F.Y. 2020-21 it was approx 2.2 % on fermented wash. The yeast sludge produced in distillery is neither toxic nor hazardous in nature. It contains nutrients like Nitrogen, Phosphorus and organic matters.

3. **CPU SLUDGE :**

Sludge is produced in a condensate polishing unit (CPU) Plant during activated sludge process. It is biological sludge. It is used as manure in farms. It is neither toxic nor hazardous in nature.

4. **OILY WASTE MATERIAL :**

No oily waste is generated in distillery except used oil. It is disposed to authorized recycler.

PART- G

IMPACT OF THE POLLUTION ABATEMENT MEASURES TAKEN ON CONSERVATION OF NATURAL RESOURCES AND ON THE COST OF PRODUCTION

A. CONDENSATE POLISHING UNIT (CPU) PLANT : (Molasses & Grain)

For waste water pollution control, The distillery unit has installed ICX reactor (Anaerobic System), Aerobic system type condensate treatment plant based on activated sludge treatment process to bring down BOD, COD, Total Suspended solid and pH in the range to the level below 30 ppm, 250 ppm, 100 ppm and 6.5 - 8.5 respectively. The other various units in the treatment process are as follows:

1. **EQUALISATION TANK -01 & -02**:

   Two equalization tanks have been provided for complete homogenization of the effluent. In the equalization tank, the pH value has been increased with addition of hydrated lime as pH booster and supplement for anaerobic granular biomass, known as ET-02.

2. **BUFFER TANK:**

   The effluent is transferred from ET-02 to the buffer tank to adjust the feeding pH for ICX reactor. This process maintains the pH value in the range of 6.5 - 7.5.

3. **ICX REACTOR:** The ICX reactor has been installed for anaerobic treatment of effluent. The generated bio gas is flared in an open atmosphere. It is an advanced anaerobic technology to get effective results in very less time. COD reduction is also very high up to 95 % - 96% based on total COD load in comparison to conventional anaerobic Process.

4. **AERATION TANK:**

   The effluent is further treated in the aeration tank by conventional activated sludge process the organic matter in the effluent is being degraded with the help of micro - organism specially grown and maintained in the aeration tank and in conjunction with dissolved oxygen transferred by diffused aeration systems is converted to new cells. The organic matter present in the homogenized effluent is thus converted to stable end products without any nuisance or health hazard. The active

sludge process is one of the most widely used processes in waste water purification resulting in 65 % - 75 % reduction in COD. The homogenized effluent is aerated in the aeration tank. During this period a mass of biologically active flock called "Activated Sludge " is formed. Nutrients are also being added to maintain healthy multiplication of biomass and level of BOD: N: P: to 100:5:1 is maintained. The mixed liquor suspended solids concentrations kept around 3000-3500 mg / l.

5. **SECONDARY CLARIFIER**:

In the second step of the above process the mixed liquor is passed through a clarifier The activated mixed liquor is passed through the clarifier where separation of the activated sludge from aerated water takes place, activated sludge is removed as down flow from the clarifier by pump, part of the sludge is recycled to the Aeration tank to act as seed for the formation of more activated sludge and homogeneously maintain the MLSS around 3500 mg/l .The part as excess sludge is sent to sludge pit to decanter for separation of sludge.

6. **HIGH RATE SOLID CONTACT CLARIFIER (HRSCC):**

In the third step of the above process the clarifier water is passed through a HRSCC clarifier, the rest suspended solids are separated through chemical treatment in this clarifier till reduction of 80 % level. The part as excess sludge is sent to the sludge pit to decanter the machine for separation of sludge.

7. **DECENTER:** A decanter has been installed for the separation of sludge generated from the clarifiers.

8. **MGF & ACF:**

MGF & ACF has been installed to reduce suspended solids and to remove odor & color of the treated effluent.

B. AIR POLLUTION CONTROL SYSTEM :

The flue gases from the Boiler is passed through the Fly Ash Arrestor, Bag filter where in the suspended particulate matter and gases are removed to a greater extent resulting in an overall efficiency of 97% removal. The type of scrubber is as under.

BAG FILTERS

A bag filter is a particulate collection device that removes particles from a flowing gas (suc using the force of an induced air pressure. The Bag filter shall be designed to provide an ou concentration level of 50 mg/N.Cu.m, with the boiler operating with the fuels as specified u section design basis.

The bag filter is designed taking into account the gas and dust characteristics expected from firi wash. The aspect ratio of the bag filter is optimally selected, so as to minimize re-entrainr carryover of the collected dust, and for assured bag filter performance.

The housing is designed to withstand 250-Deg.C and a pressure of (+) 500-mmwg. Ash capacity is minimum 4-hours with the rated conditions specified in this specification. A margi is provided in the hopper capacity over the calculated values. Electromagnetic vibrators wit panels are provided for the free evacuation of ash from the hopper. Hopper valley angle shall than 55-Deg. to ensure a positive free flow of ash to dust removal system. The boiler shall be and constructed according to the latest edition and including all the latest amendments of Indi Regulations (IBR).

BAG FILTERS

Parameters	Design Conditions
Bag filter emissions control device	No of compartment - 8 Nos No of Bags in one compartment - 384 Nos Total no of Bags - 3072 Nos
Application: Normal	Flue gas from 100% MCR bagasse and slope
Temperature inlet/ outlet	190 °C/ 190 °C
Temperature, Mech. Design	210 °C
Dust concentration at Bag filter outlet design (max)	50 mg/N.Cu.m,

PART- H

ADDITIONAL MEASURES / INVESTMENT PROPOSAL FOR ENVIRONMENTAL PROTECTION INCLUDING ABATEMENT OF POLLUTION - PREVENTION OF POLLUTION

Our distillery unit is ZLD.

PART- I

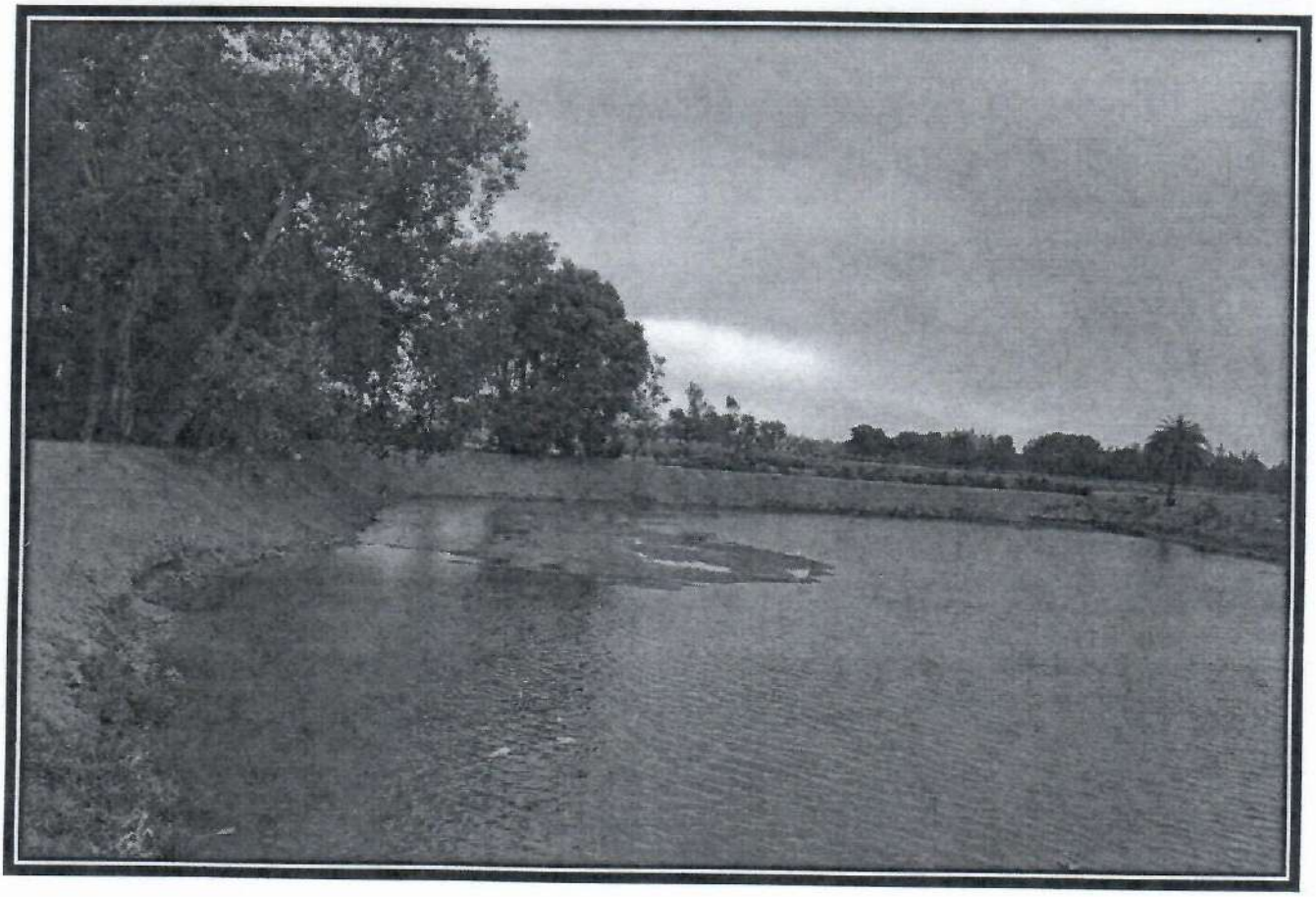
ANY OTHER PARTICULAR FOR IMPROVING THE QUALITY OF THE ENVIRONMENT

A campaign has been launched to develop and maintain greenery all around the factory campus for the same approximately 796 trees & 1000 trees have been planted in F.Y. 2022-2023 & 2023-24 respectively. The industry has kept open any investment proposal for Pollution abatement in future.

World Environment Day Celebration

Air Pollution Awareness Training

Village Ponds Adopted & maintained for Rain water harvesting-




REDMI NOTE 10

Signatures of Audit Team

(Dhiraj kumar Yadav)

(R.N. Thakur)

(A. K. Arya)

(Ajay Kapoor)