

**BIHAR STATE POLLUTION CONTROL BOARD**

PARIVESH BHAWAN, PLOT NO. NS-B/2, PALIPUTRA INDUSTRIAL AREA,

PATLIPUTRA, Patna – 800 010

From

S. Chandrasekar,
Member Secretary

To,

M/s Magadh Sugar & Energy Ltd.
Unit: New Swadeshi Sugar Mills
Distillery Division,
At P.O-Narkatiaganj,
Dist- West Champaran-845455

Subject: Consolidated Consent to Operate and Authorisation hereinafter referred to as the CCA (Consolidated Consent & Authorization) Renewal 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).

Application No.- 4096077

Dated: 29.10.2020

CCA (Renewal).....1048

Date:-20-06-23.

Consolidated Consent to Operate and Authorization (CCA):

CCA is hereby granted to M/s Magadh Sugar & Energy Ltd. Unit: New Swadeshi Sugar Mills located at P.O-Narkatiaganj, Dist-West Champaran-845455 subject to the provisions of the Water Act, Air Act and Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the orders that may be made further and subject to following terms and conditions:

1. This CCA is granted for the period upto **22.11.2025** from the date of issuance of this letter, under Section-25 of the "Water (Prevention & Control of Pollution) Act, 1974.
2. This CCA is granted for the period upto **22.11.2025** from the date of issuance of this letter, under Section-21 of the "Air (Prevention & Control of Pollution) Act, 1981.
3. This CCA is granted for the period upto ~~<xx/xx/20xx>~~ from the date of issuance of this letter under Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016" notified under "Environment (Protection) Act, 1986.
4. **Production Capacity :**

S.No.	Declared by the industry			Permitted by the Board
	Raw Material/ Feedstock (Qtl/day) C-Heavy/ B-Heavy/ Cane syrup/ sugarcane juice	Finished Product (KL/day)	Type of Product	
I.	C-Heavy	80	Ethanol	Yes

5. Production Process Infrastructure

S.no.	Declared by the unit				Permitted by the Board
	Number of fermenters	Capacity of fermenters	Type of fermentation technology adopted	Type of Distillation	
1	5	2058975.0 Ltr	Fed Batch	MPR	Yes

Molasses storage infrastructures:

Declared by the unit			Permitted by SPCB
Capacity	No. of tanks	No. of lined pits*	
318203.07 Qtl.	4	No	Yes

*The unit shall not store molasses in Kaccha/ unlined pits.

6. Water Conservation

A. Fresh water Consumption

- The unit shall obtain permission / NOC from State or Central Ground Water Authority for Groundwater abstraction and shall comply with the conditions mentioned in the NOC.- **We have obtained NOC from CGWA vide NOC No. CGWA/IND/REN/1/2021/6469 and complying the conditions mentioned in the NOC.**
- Industry shall install separate sealed, calibrated Electro Magnetic Flow meters with flow totalizer at all water abstraction sources, utilization lines- process, domestic and boiler.- **We have already installed Electro magnetic Flow meter with totalizer at all prescribed points**
- The industry shall maintain duly signed logbook of fresh water consumption and utilization.- **We are maintaining**
- The specific water consumption shall not exceed values mentioned below as per consented product type.

<u>Category</u>	<u>Specific Water Consumption not to exceed</u>
B-Heavy	8-10 KL/KL of product
C-Heavy	8-10 KL/KL of product
Cane syrup/ sugar cane juice	6-8 KL/KL of product

	Declared by the Industry	Permitted by NOC issued by CGWA	CGWA conditions
No. of borewells	01	01	
Daily quantity of water to be abstracted (KLD)	570-590 KLD	940 KLD	

B. Effluent generation, treatment and disposal:

- i. The quantity of maximum specific effluent generation shall be as specified below:

Category	Specific spent wash generation ⁵ , not to exceed
B-Heavy	6-8 KL/KL of product
C-Heavy	6-8 KL/KL of product
Cane syrup/ sugar cane juice	4-6 KL/KL of product

- ii. The quantity of maximum daily effluent generation & discharge should not be more than the following:

S.No.	Kind of Effluent	Maximum daily generation	Maximum daily discharge, KLD	Treatment Facility and Discharge point
1	Domestic	5-7 KLD	NO	STP
2	Industrial (Spent wash)	460-480 KLD	ZLD	

- iii. Arrangement should be made for collection of water used in process and domestic effluent separately in closed water supply system. It should be ensured that domestic effluent should not be discharged in the storm water drain.
- iv. The domestic effluent should be treated in sewage treatment plant (STP) and it should be in conformity with the norms of treated effluent as stipulated in E.P. Rules, 1986 as amended.
- v. The unit shall identify recipient drains/ rivulets and their u/s & d/s locations <coordinates of the drain > in consultation with SPPCB for monthly monitoring by industry to ensure ZLD from distilleries within 30 days. The monitoring report shall be submitted to CPCB on monthly basis.

S. No.	Name of recipient drain/rivulets	Latitude	Longitude	Quality of effluent of drain	Name of the recipient river
	-	-	-	-	-

- vi. The industry shall achieve Zero Liquid Discharge (ZLD). ZLD refers to installation of facilities and system which will enable industrial effluent (all stream) for absolute recycling of or re-use in to industrial process and converting solute (dissolved organic and in-organic compounds / salts) into residue in solid form by adopting method such as concentration/ evaporation/drying. ZLD will be recognized and certified based on two broad parameters that is, water consumption versus waste water reused or recycled (permeate) and correspondingly solids recovered (percent total dissolved / suspended solids in effluents).

C. Effluent Management Infrastructure:

Bio-digester				
S.no.	No. of digesters	Designed Capacity (m3)	Sludge generation from digester	Method of disposal/ utilization of sludge

01	01	17178	0.02% on BOD load	Bio-compost	
Multi Effect Evaporator (MEE)					
S.No.	No of MEE	Design Capacity (m3)	Type of technology of MEE (stages)	Mass flow meter installed at inlet and outlet of MEE	
01	01	850	Four stage falling film evaporator with 2 Nos Force Circulation	Mass Flow meter installed at Inlet & outlet of MEE	
Condensate Polishing Unit (CPU):					
**For treatment of MEE condensate and other low-strength effluent					
S.No.	Design Capacity (m3)	Type of technology of CPU	Sources of effluent coming into CPU with Quantity	Quantity of treated effluent from CPU and its utilization	Quantity of CPU sludge & its disposal mechanism
01	850 m3	Anaerobic	MEE condensate followed by Aerobic	700-750 m3/day treated water sent cooling tower as makeup water	Recycle and used in Drying Bed
Reverse Osmosis (RO) system					
1	28.0 m3 (22+6 m3)	2	423 m3 used to CTs makeup.	105 m3 recycle by MME & Quenching.	Ash

- vii. All process and non-process effluents such as Spent lees, Process condensates, Boiler RO reject, CT blowdown, Softener/DM plant backwash, Pump gland cooling water etc. should be treated through CPU and recycled back in the process.- **Following**
- viii. The unit shall install mass flowmeters with totalizers at inlet and outlet of Multi Effect Evaporator (MEE) (concentrate) and shall connect the same with CPCB and BSPCB server;- **Complying**
- ix. The unit shall install electromagnetic flowmeters with totalizer at CPU inlet & outlet and at water recirculation points like make up water for cooling towers& in process. The unit shall have separate energy meter for ETP/CPU and maintain the duly signed logbook of the same.- **Complying**
- x. The unit shall maintain duly signed logbooks of spent wash generation, MEE feed, MEE condensate, MEE concentrate, CPU inlet & outlet, Cooling tower make up water and treated effluent reused in process.- **Complying**
- xi. The unit shall ensure proper marking/and colour coding of all the pipelines carrying industrial effluent accordingly.

Distilleries opting for Bio-composting;

- i. The final storage capacity of lagoon for storage of concentrated spent wash after M.E.E to be utilized in bio-composting shall be strictly restricted to thirty days equivalent of

concentrated spent wash (40% by volume of spent wash generated and solid concentration shall be maintained 30%). The lagoon shall be impermeable and properly lined.

ii. **Details of lagoons**

Declared by unit				Permitted By Board
S.no.	No of Lagoons	Dimensions of lagoon	Capacity of lagoon (m3)	
01	01	112x86x1.5 Mtr.	14448	Yes

- iii. For concentrated spent wash having total solids 27 - 30 %, the filler material (press mud) to spent wash ratio prescribed is 1: 1.6 for 60 days' cycle.
- iv. Impervious compost yard area based on material balance (plus ready compost storage area) should be made available. The unit shall strictly implement the Standard Operating Procedure (SOP) for Bio-composting operation for Molasses based distilleries. (Link: https://cpcb.nic.in/ngrba/Biocomposting_SOP_for_distillery-Final_10.08.2018.pdf). - **Strictly Following**
- v. The unit having uncovered bio-compost area, shall stop its bio-compost activities in monsoon period (July –September). The unit shall make extra land arrangements for storage for press mud and ready bio-compost.- **Strictly Following**
- vi. Unit must install and maintain online connectivity of PTZ web cameras at the bio-compost yard and lagoons with server of CPCB and BSPCB- **Installed and connected with CPCB & BSPCB server.**

vii. Details of Bio-composting area requirement; as permitted by the Board:

S.no.	Total area for bio-composting	Active area for bio-composting(excluding the land arrangements for storage for press mud and ready bio-compost)	Covered area	Uncovered area	Number of Piezometric wells available around the compost
01	18.21 Acre	10 Acre	2 Acre	16.21 Acre	03

- viii. Obtaining valid registration/certification for the production and quality of bio-enriched Organic manure (bio compost) as per Gazette Notification S.O. 2776 (E) dated 10.10.2015 under the Fertilizer (Control) Fourth Amendment Order, 2015 issued by Ministry of Agriculture and Farmers Welfare (Dept. Of Agriculture, Cooperation and Farmers Welfare) from the Ministry of Agriculture/ concerned agency – within a time period of four months. - **Obtained within stipulated period**
- ix. The finished bio-compost shall be packed in sealed poly bags super scribed with quality and composition of bio compost along with the name of the manufacturer industry. - **Complying as per direction**
- x. The unit shall maintain a record of procurement/ availability of press mud, sell of compost and compost quality on monthly basis.- **Maintaining Records as per direction**
- i. The unit shall not be sale ready bio-compost in open tractors/trolleys.- **Following**

Distilleries opting for Incineration;

- i. Minimum Solid % in feed for slop fired incinerator shall be 55-60% in case of C-Heavy and B-Heavy molasses as feedstocks and 50-55% in case of sugar syrup/sugarcane juice as feedstock.

- ii. Maximum storage of raw spent wash utilized in MEE followed by incineration shall strictly be restricted to seven days (07) equivalent of concentrated spent wash generated. Excess storage facilities beyond this shall be levelled and dismantled.
- iii. The unit shall collect ash generated from Incineration boiler through screw/belt conveyor from common silo and should be disposed off as fertilizer or for any other use.
- iv. Fly ash shall be stored separately as per CPCB guidelines so that it should not adversely affect the air quality, becoming air borne by wind or regime during rainy season by flowing along with storm water. Direct exposure of workers to fly ash & dust shall be avoided.
- v. The unit shall sell potash rich ash to industries for potash recovery plant, fertilizer company or sell the ash to the farmers after meeting FCO conditions.
- vi. Unit shall dispose the spent wash through MEE followed by use of concentrated spent wash (as stated in point i) fuel in the Incineration boiler of ...TPH.

S.no.	Type of Boiler	Capacity of Boiler (TPH)	Type of subsidiary fuel used	Quantity of subsidiary fuel consumed (MT/day)	Quantity of ash generated (MT/day)	Method of Ash Disposal

Distilleries opting for dryer;

- ii. Minimum Solid % in feed for dryer shall be 40-45%.
- iii. Maximum storage of Bio-methanated spent wash utilized in dryer shall strictly be restricted to seven days (07) equivalent of concentrated Bio-methanated spent wash generated. Excess storage facilities beyond this shall be levelled and dismantled.
- iv. The unit shall collect powder produced from dryer in common silo and should be disposed off as fertilizer.
- v. Unit shall dispose the spent wash through Bio-methanation followed by Bio-methanated spent wash MEE followed by use of concentrated bio-methanated.

D. Domestic sewage

- i. The domestic effluent should be treated separately in sewage treatment plant/ soak pit so that it should be in conformity with the following norms.

Domestic Effluent/ sewage discharge norms		
S. No.	Parameter	Standard
1.	pH	As per SPCB
2.	BOD	As per SPCB
3.	COD	As per SPCB
4.	TSS	As per SPCB
5.	T. Nitrogen	As per SPCB

- *Trade effluent and domestic sewage shall be treated separately and also to be monitored for compliance w.r.t. notified norms separately. However, Single outlet can be provided after mixing for outside disposal.
- ii. Industry shall install the flow meter at STP inlet and outlet and maintain the daily logbook.

- iii. Industry shall explore the possibility to recycle the treated used water shall be utilised in gardening, irrigation, industrial utility and toilet flushing to minimise the fresh water consumption up to 20 % per year.

7. Air pollution mitigation

- i. The industry shall use following fuel and install air pollution control devices (APCD) of adequate capacity to comply with the following;

S. No.	Equipment	Fuel used	Stack height	Air Pollution Control Device (APCD)	Stack Emission standards
I.	Equipment in use/standby	Bagasse gas	45	Multi Cyclone dust collector with Wet Scrubber	42.8
II.	Equipment in use/standby	-	-	as per EPA Rules	as per EPA Rules

- i. The industry shall operate in a manner so that all emissions be emitted through designated chimney/stack only.
- ii. The APCS will be maintained and operated in such a manner that emissions always conform to the standard laid down under the E.P Act 1986 as amended. The ash generated from the Boiler shall be disposed of properly in such a manner that not affects the environment adversely.
- iii. The unit shall install Online Stack Emission Monitoring System (OEMS) for PM and ensure with its connectivity (24x7) to CPCB server and <BSPCB> dashboard.- **Installed and connected with CPCB & BSPCB server**
- iv. The unit shall submit manual stack emission monitoring report and ambient air quality report on quarterly basis during operation of the plant.- **Following**
- v. Water shall be sprinkled on the roads and premises for suppression of road dust.- **Following on regular basis**
- vi. The solid waste namely boiler ash shall be disposed of properly and ensure that there is no fugitive emission from their transportation, storage and handling.- **Ensuring positively**
- vii. The industry shall provide ports in the chimney/stack and facilities such as ladder, platform etc. as per requirement for monitoring the air emissions and the same shall be open for inspection and use at all time) by the Board's staff, the chimney/stack attached to various sources of emission shall be designated by number such as S-1, S-2 etc. and these shall be painted/ displayed to facilitate identification. - **Already displayed**

8. Noise Pollution Mitigation:

- i. Noise from the D.G. Set and other source(s) should be controlled by providing an acoustic enclosure as is required for meeting the ambient noise standards for night and day time as prescribed for respective areas/zones (Industrial and Commercial) which are as follows: -

Standards for Noise level in db.(A) L_{eq}			
Industrial Area		Commercial Area	
Day	Night	Day	Night
75	70	65	55

Day time: from 6.00 a.m. to 10.00 p.m., Night time: from 10.00 p.m. to 6.00 a.m.

- ii. The industry shall take adequate measures to control of noise from its own source so as to comply with the standards as may be applicable.
- iii. The industry shall provide acoustics enclosure on DG sets as per Environment (Protection) Rules, 1986.

9. Conditions under Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016: -

Hazardous Waste Management (As per FORM 2 - [rule 6(2)])

- i. Number of authorization and date of issue: HW/B-1868 dated 12.08.2021.
- ii. Reference of application (No. and date) : 4480467, dated-15.02.2021.
- iii. **M/s Magadh Sugar and Energy Limited, Distillery Division** of is hereby granted an authorization based on the enclosed signed inspection report for generation, collection, reception, storage, transport, reuse, recycling, recovery, pre-processing, co-processing, utilization, treatment, disposal or any other use of hazardous or other wastes or both on the premises situated at **M/s Magadh Sugar and Energy Limited, Distillery Division, P.o-Narkatiagaj, Dist-West Champaran, Bihar-845455**

Details of Authorization

Sl. No.	Category of Hazardous Waste as per the Schedules- I, II and III of these rules	Authorised mode of disposal or recycling or utilisation or co-processing, etc.	Quantity (ton/annum)
01	Used or Spent oil (HW cat. No. 5.1) Schedule - I	Generation, collection, storage, transportation, and offering for sale of used or spent oil (HW cat. No. 5.1) for the temporary period in MS	Used or spent oil: 01 KLA (0.850 MTA)

- iv. The authorization shall be valid for a period of **Five Years from the date of issue**
- v. The authorization is subject to the following general and specific conditions (Please specify any conditions that need to be imposed over and above general conditions, if any):

A. General conditions of authorization:

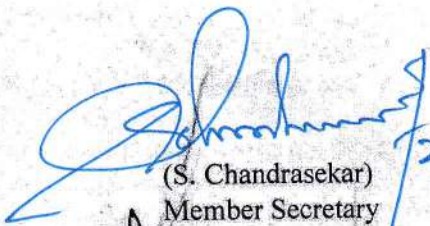
1. The authorized person shall comply with the provisions of the Environment (Protection) Act, 1986, and the rules made there under.
2. The authorization or its renewal shall be produced for inspection at the request of an officer authorized by the State Pollution Control Board.
3. The person authorized shall not rent, lend, sell, transfer or otherwise transport the hazardous and other wastes except what is permitted through this authorization.
4. Any unauthorized change in personnel, equipment or working conditions as mentioned in the application by the person authorized shall constitute a breach of his authorization.
5. The person authorized shall implement Emergency Response Procedure (ERP) for which this authorization is being granted considering all site-specific possible scenarios such as spillages, leakages, fire etc. and their possible impacts and also carry out mock drill in this regard at regular interval of time;

6. The person authorized shall comply with the provisions outlined in the Central Pollution Control Board guidelines on "Implementing Liabilities for Environmental Damages due to Handling and Disposal of Hazardous Waste and Penalty"
7. It is the duty of the authorized person to take prior permission of the State Pollution Control Board to close down the facility.
8. The imported hazardous and other wastes shall be fully insured for transit as well as for any accidental occurrence and its clean-up operation.
9. The record of consumption and fate of the imported hazardous and other wastes shall be maintained.
10. The hazardous and other waste which gets generated during recycling or reuse or recovery or pre-processing or utilization of imported hazardous or other wastes shall be treated and disposed of as per specific conditions of authorization.
11. The importer or exporter shall bear the cost of import or export and mitigation of damages if any.
12. An application for the renewal of an authorization shall be made as laid down under these Rules.
13. Any other conditions for compliance as per the Guidelines issued by the Ministry of Environment, Forest and Climate Change or Central Pollution Control Board from time to time.
14. Annual return shall be filed by June 30th for the period ensuring 31st March of the year.

General Conditions

1. Environmental management system
 - i. Industry shall setup the environmental management cell including unit head, purchase/store manager, process operation head, ETP in charge to effectively monitoring of environmental compliance - **Already setup environmental management cell for timely compliance**
 - ii. Industry shall setup the environmental laboratory for testing of minimum wastewater quality parameters like pH, TSS, BOD, COD, MLSS and DO to effectively monitoring of ETP control parameters and ETP discharge norms.- **We have well equipped laboratory with qualified technical persons for analysis work**
2. The applicant shall get analyses the samples of effluent/emission/hazardous wastes at least once in a three month from the laboratory recognized by the MoEF&CC and shall report to the SPCB.- **We are analysing the samples on monthly by the recognized laboratory M/s. Shiva Test house Patna and report are being submitted to BSPCB**
3. The applicant shall however, not without the prior consent of the Board bring into use any new or altered outlet for the discharge of effluent or gases emission or sewage waste from the unit.- **Strictly follow**
4. Treated waste water and domestic waste water shall be disposed jointly at one disposal point. The applicant shall provide discharge measurement equipment at final disposal point.- **We are Maintaining ZLD**
5. The applicant shall strictly comply with conditions of this CCA and submit compliance report of stipulated conditions with 30 days of receipt of this CCA. If, at any point of time, it is found that the industry is not complying with stipulated conditions or any further direction/instruction issued by the **Board**, legal action shall be initiated against the applicant.- **Agreed**
6. The applicant shall maintain good housekeeping. All valves/pipes/sewer/drains etc. must be leak-proof.- **Being Strictly followed**
7. The industry shall provide uninterrupted entry to this STP's/ETP's inlet and outlet points, Air Pollution Control equipment and stack for smooth sampling/monitoring of efficiency of pollution control measures. - **Maintaining**

8. The industry shall provide "Inspection Book" at the time of inspection to the Board's officials. Whenever due to any accident or other unforeseen act or event, such emission occurs or is apprehended to occur in excess of standards laid down, such information shall be reported to the Board's offices and all other concerned offices. In case of failure of pollution control equipment, the production process connected to it shall be stopped with immediate effect. - **Agreed**
9. In case of any damage to the agriculture productivity, human habitation etc. by the operation of industry, it shall be imperative to stop production in the industry with immediate effect and such information shall be reported to Board's offices. The industry shall be liable to pay compensation also in such cases as decided by the Competent Authority. - **Strictly complying**
10. The applicant shall apply before the 60 days of expiry of CCA or any change in production types/production capacity/manufacturing process/capacity enhancement etc. or any change in effluent discharge point or emission point. - **Will Strictly followed**
11. The **Board** reserves the right to revoke/add/modify any stipulated conditions issued along with CCA, as may be necessary. - **Agreed**
12. Any unauthorized change in personnel, equipment as working condition as mentioned in the application by the person authorized shall constitute a breach of his authorization.
13. It is the duty of the authorized person to take prior permission of the **Board** to close down the facility.
14. The authorization is valid for temporary storage of Hazardous Waste within premises only.
15. It is duty of the authorized person to take prior permission of this Board to close and cleanup the facility for treatment, storage and disposal of hazardous waste.
16. Industry shall submit the latest copy of Audit Balance sheet/C.A. Certificate (Fixed Assests+Current Assets-Current Liabilities) so that the Consent fee payable by the industry may be verified.
17. Generated hazardous waste shall be stored temporarily in the factory premises and disposed of through authorized TSDF after obtaining the authorization from the Board
18. Unit shall develop green belt as per the protocol of Board's office order dated..... which is available on Sate Board's Website. - **We have developed green belt area inside company premises and nearby areas.**
19. The industry shall comply with the provisions of Environment (Protection) Amendment, Rules 2018 notified by MoEF&CC by Notification no 49 Dt. 25.01.2018, Environment (Protection) Act 1986, Water (Prevention and Control of Pollution) Act, 1974 as amended, Air (Prevention and Control of Pollution) Act, 1981 as amended, Plastic Waste Management Rule 2016, E-Waste (Management and Transboundary Movement) Rules 2016 (Whichever is applicable).- **Complying the provisions as mention in above act & rules.**
20. If closure order is issued by CPCB or SPCB against the unit then CCA will remain suspended during the closure period. After ensuring the compliance and after revocation of the closure order, the CCA will automatically be effective from the date of issuance of the closure revocation order with additional conditions mentioned in the closure revocation order.


 (S. Chandrasekar)
 Member Secretary

/21/6/23