



BIHAR STATE POLLUTION CONTROL BOARD
PARIVESH BHAWAN, PLOT NO. NS-B/2, PALIPUTRA INDUSTRIAL AREA,
PATLIPUTRA, Patna – 800 010

From

Neeraj Narayan,
Member Secretary

To,

M/s Magadh Sugar and Energy Ltd,
Unit: New Swadeshi Sugar Mills,
At & P.O. - Narkatiaganj,
Distt- West Champaran 845455
Sate- Bihar (INDIA)

Consolidated Consent to Operate and Authorization 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 ID – 10094878

dated: 26.10.2024

Ref. No.: 2735

Date: 02.12.24

CCA is hereby granted to M/s. Magadh Sugar & Energy Ltd, Unit: New Swadeshi Sugar Mills, Narkatiaganj, Dist-West Champaran, located at 27.11523152 °N, 84.46229784 °E 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 **up to 30/09/2029** 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 **up to 30/09/2029** 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 **up to 04/06/2026** 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

Sl No	Type of Sugar Industry	Capacity of Co-generation	Cane crushing capacity (in TCD)	Permitted by the Board
I.	Standalone sugar	-	-	-
II.	Sugar with co-generation	10.25	10,000 TCD	-
III.	Refinery	-	-	-
IV.	Refinery with co-generation	-	-	-

5. Water conservation:

A. Fresh water consumption:

- Categorization of existing groundwater area: Safe/ Semi critical /Critical// Over-Exploited/ Saline – **Safe zone**
- Status of NOC from CGWA/SGWB: Applied/granted - **Granted**
- Validity of NOC: **30/09/2028**
- Details of Artificial recharge system/rain water harvesting unit installed with capacity- **We have installed 8 Nos. rain harvesting pit.**
- Details of piezometer installed i.e., numbers with coordinates- **2 Nos. piezometer installed as per CGWA NOC.**
- Industry shall install sealed and calibrated flow meters at fresh water abstraction and consumption points (process & domestic) and maintain the logbooks for same.

Sl. No.	Sources of fresh water	Nos. with daily abstraction capacity		Applied quantity (KLD)	Max. Permitted abstraction quantity (KLD)	Status of flow meter installed
1.	Borewell	BW-1	600 KLPD	600	600	Yes
		BW-2	600 KLPD (Standby)			Yes
2.	Supply water	No				Yes/No
3.	Surface water/ Treated used water	No				Yes/No

- Maximum allowable fresh water consumption based on applicable specified process category

S. No.	Type of Sugar Industry	Fresh Water Consumption
		Industrial (L/T of Cane Crushed)
1.	Stand alone sugar	<80
2.	Sugar with co-generation	<100
3.	Refinery	<80
4.	Refinery with co-generation	<100

B. Effluent generation, treatment and disposal: -

S. No.	Kind of Effluent	Maximum daily discharge, KLD	Treatment Facility and Discharge point
1	Domestic	188 KLD	STP
2	Industrial	375 KLD	ETP

- The specific quantity of maximum daily effluent discharge should not be more than the following:

S. No.	Type of Sugar Industry	Maximum daily treated effluent discharge limit* (L/T of cane crushed)
1.	Stand alone sugar	<160

2.	Sugar with co-generation	<180
3.	Refinery	<170
4.	Refinery with co-generation	<180

*Maximum daily discharge shall be equal to multiplication of total production as per Para 4 and specific effluent discharge as per Para 5 (B-a). The treated effluent shall be recycled to the maximum extent and remaining treated effluent after tertiary level treatment shall be used for irrigation purpose/disposed.

- b. Industry shall install the Effluent treatment plant consisting of primarily (screen, grit chamber and equalization tank with air blower, neutralization tank, primary clarifier), secondary biological treatment (anaerobic filter tank**, aeration tank and secondary clarifier) and tertiary treatment (MGF/ACF etc.) units with adequate capacity. **In case no separate sulphate removal system installed.
- c. The industry shall install flow meters at ETP inlet, outlet and recycling point and maintain the daily logbook for the same.
- d. Industry shall install the OCEMS of parameters pH, BOD, COD, TSS and flow at outlet and connected to CPCB/SPCB servers.
- e. Effluent generated in all the processing houses viz. mill & boiling house, steam generation house, Process Cooling Tower (PCT) blow down/ spray pond i.e. overflow, DM/RO reject/gland leakages from boiler feed pump, effluent generated from dewatering of sludge and washing of floor and other equipment etc. should be treated in ETP before its disposal* so that it should be according to the norms prescribed as under.

S. No.	Parameter	Standard
1.	pH	5.5 –8.5
2.	Biological Oxygen Demand (BOD) (mg/l)	30
3.	Chemical Oxygen Demand (COD) (mg/l)	250
4.	Total Suspended Solids (TSS) (mg/l)	30
5.	Total Dissolved Solids (TDS) (mg/l)	2100
6.	Oil & Grease (O&G) (mg/l)	10

In case of stoppage of functioning of ETP, production has to be stopped immediately and this Board has to be intimated by fax/phone/email with a report in this regard to be dispatched immediately.

- f. During no demand period for irrigation, the treated effluent to be stored in a seepage proof lined pond (Lagoon) having 15 days holding capacity only. The treated effluent being pumped for irrigation purpose from lagoon shall comply with the effluent discharge norms prescribed for irrigation vide Gazette dated 14.01.2016 under Schedule I of E(P)Rules,1986. The industry shall install sealed electromagnetic flow meter at outlet point of lagoon and shall maintain record of running hour and treated effluent used for irrigation purpose.
- g. Effluent Treatment Plant to be stabilized one month prior to the start of the crushing season and continue to operate one month after the crushing season.
- h. Proper color coding of pipe lines and water channels to be implemented for the recycled process water, fresh water and effluent carrying lines.
- i. The industry shall identify recipient drains/rivulets and their u/s & d/s location in consultation with <Name of SPCB> and shall carry out monthly monitoring of identified recipient drains at u/s & d/s location through lab recognized under Environment(P) Act, 1986 and shall submit the analysis report on monthly basis to CPCB and BSPCB.

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

j. Sludge handling system

S.No.	Sludge handling system (SDB/Centrifuge /Filter press)	Quantity of ETP sludge	Sludge storage area	Sludge disposal mechanism
1.	SDB provided		8 Nos of SDB provided	Used as manure at own farms

C. 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.

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.

Cleaner Technology and waste minimization options:

- i. Principle Secretary, <BSPCB>issued directions dated <.....> directing sugar mills to implement the “**Charter for Effluent Treatment by Sugar Factories Situated in River Ganga Basin**” conditions, which was formulated by CPCB to enforce appropriate technologies for effluent treatment in sugar factories and to comply with the prescribed environmental norms, accomplish desired level of environmental protection and achieve prescribed norms of discharge.
- ii. According to Charter, the industry shall implement a “Model condensate conservation cum Hot & cold Water Management System” focusing on maximum recycling of water. Necessary system comprising cooling towers and underground reservoirs etc. shall be implemented separately for cold re-circulating water and surplus condensate. Unit shall install electromagnetic flow meters at following points:

S.No.	Flow meter installation points at Hot & Cold-water recycling system
1.	Hot water UGR.
2.	Cold water UGR and cooling towers
Hot water- Location of flow meter & its Installation	
1.	Imbibitions water at mills
2.	Filter cake wash water at rotary vacuum filter
3.	Sugar melting, pan boiling, molasses conditioning
4.	Wet Scrubber make-up
5.	Boiler make-up in case of low pressure boiler
Cold water-Location of flow meter & its Installation.	
1.	Power turbine cooling

2.	Mills, fibrizer bearing, pumps cooling
3.	Wet scrubber make-up
4.	Cooling tower of co-generation make-up
5.	SO ₂ gas cooling
6.	B and C massecuite cooling
7.	Final molasses cooling

- iii. Recirculation of water employed in SO₂ gas coolers shall be ensured with proper cooling through cooling towers in case of plantation white sugar.
- iv. The industry shall ensure the construction of small pits with smooth cleaned inner surface preferably with ceramic tiles near to boiler feed pumps, condensate pumps. Injection pumps spray pumps and RVF vacuum pumps to collect gland cooling water in their respective pits without any contamination.
- v. The industry shall implement dry cleaning of factory floors etc. using bagasse instead of wet cleaning using water.
- vi. The industry shall provide covered conveyor to transfer bagasse by the sugar factories to prevent floating bagasse particles in ambient air.
- vii. Re-circulation of cooling water used for cooling B and C- massecuites with proper cooling through cooling towers arrangement rather drawing fresh water shall be adopted.
- viii. Minimum quantity of wash water to be applied at centrifugals for B and C mass quite curing to minimize loss of sugar in molasses and to control steam consumption.
- ix. The industry shall install CPU (Condensate Polishing Unit) to use surplus condensate for use as make-up water at cogeneration cooling tower & boiler feed water (for low/medium pressure boilers) and for use as make-up water at cogeneration cooling tower (for high pressure boilers).
- x. The industry shall install membrane based (2-stage) or other suitable technologies to attain a brine recovery of at least 80% in sugar refineries having Ion Exchange Resins for de- colorization of the sugar melt and rinse water recovery system in case of sugar refinery.
- xi. The industry shall use of surplus cooled condensate as make up water replacing the fresh water thus reducing fresh water requirement and effluent generation as well.
- xii. The industry shall adopt different options for separate or combined treatment of spray pond/PCT overflow as mentioned in charter.
- xiii. The industry shall ensure the maintenance of retention /contact time in various sub-units of ETP viz. equalization tank, aeration tank, primary and secondary clarifiers, multi-grade filters, multi grad and activated carbon filter etc. as per charter.

S. No.	Unit with sizes/capacity	Retention Time/Contact Time (Mentioned in CPCB charter)	As declared by Industry
1.	Bar screen Chamber	30 minutes	62 min.
2.	Oil & grease tank	45 minutes	45 min.
3.	Pre-Storage		48.5 hrs.
4.	Equalization tank with aeration	6 hrs	8.6 hrs.
5.	pH correction tank	10 minutes	67 min.
6.	Primary Clarifier	5-6 hrs	6.7 hrs.
7.	Anaerobic Filter Tank		26.0 hrs.
8.	Aeration tank	24-28 hrs	36.9 hrs.
9.	Secondary Clarifier	7-8 hrs	8.14 hrs.

10.	Sand/multi grade filter	20-25 minutes	26 min.
11.	Activated carbon filter	20-25 minutes	26 min.
12.	Sludge drying bed	Not less than 0.03 m ³ per ton of cane.	8 Nos of SDB & adequate to need
13.	Centrifuge	The equipments to be of adequate capacity for handling the sludge generated in the process.	
14.	Filter Press		

- xiv. Proper infrastructure for operation and maintenance of ETP shall be developed by recruiting / hiring required skilled & technical staff.
- xv. Analytical facilities (laboratory) for analysis various streams of water, untreated and treated effluent for various parameters viz. pH, BOD, COD, TSS, TDS and MLSS etc. shall be developed by the industry.
- xvi. The industry shall create Environment Management Cell by appointing Environment officer, Engineer, chemist, agricultural expert and the same copy submitted to the board with contact details.
- xvii. The industry shall resort to rain water harvesting as a measure towards avoiding exploitation of natural resources. Rain water recharge structures/ pits/ ponds near to processing area should be discouraged due to possibilities of entering effluent/ industrial runoff in ground water.

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
- 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.

6. Air pollution mitigation: -

- (i) The applicant shall use following fuel and install a comprehensive control system consisting of control equipment as is required with reference to generation of emissions and operate and maintain the same continuously so as to achieve the level of pollutants to the following standards:

Sr. No.	Stack attached with	Stack height (Mt)	Type of Fuel	Fuel Quantity	Emission Control Equipment	Emission standards not to exceed
1.	Boiler (35 TPH) *2	45	Bagasse	100	Wet-scrubber	150
	Boiler (90 TPH) *1	45	Bagasse	100	Wet-scrubber	

In case of stoppage of functioning of STP, production has to be stopped immediately and this Board has to be intimated by fax/phone/email with a report in this regard to be dispatched immediately.

- (ii) Noise from the D.G set and other sources (s) should be controlled by providing an acoustic enclosure as is required for meeting and ambient noise standards for night

and day time as prescribed for respective areas/zones (Industrial, Commercial, Residential, Silence) which are as follows: -

Standards for noise level in db(A) leq	Industrial Area		Commercial Area		Residential Area		Silence Zone	
	Day time	Night time	Day time	Night time	Day time	Night time	Day time	Night time

Day time: - 6.00 am to 10.00 pm, Night time: - 10.00 pm to 06.00 am

- (iii) The industry shall operate in a manner so that all emissions be emitted through designated chimney/stack only.
- (iv) The industry shall keep record for boiler ash & its disposal and maintain the designated boiler ash disposal site properly fenced with caution is play to avoid accidents.
- (v) The APCS for controlling emissions should be properly maintained and continuously operated. The stack should be as per norms and regular monitoring of stack and ambient air should be done by the laboratory recognized under E(P) Act 1986 and report be sent to the Board.
- (vi) The water shall be sprinkled on the roads and premises for suppression of road dust.
- (vii) The sugar factories shall provide On-line emission (stack) monitoring system to monitor record and transmit the data related to SPM level (mg/Nm³) to <Name of SPCB>/ CPCB.
- (viii) The industry shall prepare Standard Operating Procedures (SOPs) for accident management and Process safety management.

7. 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:
- ii. Reference of application (No. and date) :
- iii. **M/s. Magadh Sugar and Energy Ltd, Unit: New Swadeshi Sugar Mills, Narkatiaganj, Dist-West Champaran** 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

Details of Authorization

Si. No.	Category of hazardous waste as per the schedules I, II and III of these rules	Disposal or recycling or utilization or co-processing, etc.	(ton/annum)
1	Cat. No.- 5.1	Stored in MS drums for the purposed of its reuse or send to recycler	1.8

- iv. The authorization shall be valid for a period of five years from 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. The applicant shall get analysis of 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.
2. 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.
3. 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.
4. 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.
5. The applicant shall maintain good housekeeping. All valves/pipes/sewer/drains etc. must be leak-proof.
 6. 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.
 7. The industry shall provide "Inspection Book" at the time of inspection to the Board's officials.
 8. 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.
 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.
 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.
 11. The **Board** reserves the right to revoke/add/modify any stipulated conditions issued along with CCA, as may be necessary.
 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 **33 % of the plant area as per EC granted F. No. SIA/(5j)/1276/2021 dated: 02.04.2021**, which is available on Sate Board's Website.
 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).
 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.

Issue with the permission of the competent authority.


(Neeraj Narayan)
Member Secretary