

**JOINT INSPECTION REPORT OF KISAN SAHKARI CHINI MILLS LIMITED
SHEKHPUR, BADAUN
(UTTAR PRADESH)**

In the matter of

M/s Kisan Sahkari Chini Mills Ltd.

Vs

**Member Secretary, U.P. Pollution Control Board & Ors.
(Appeal No. 28/2020)**

1.0 Background

In compliance of Hon'ble NGT order dated 12.04.2021 in the matter of M/s Kisan Sahkari Chini Mills Ltd. Vs Member Secretary, U.P. Pollution Control Board & Ors.) (Appeal No. 28/2020), inspection of Kisan Sahkari Chini Mills Limited, Sheikhpur, Badaun, UP (hereafter referred as "the unit") was carried out by a joint team of CPCB, Regional Directorate, Lucknow and UPPCB, Regional Office, Bareilly on 09.12.2021. Salient details, observations and recommendations made during the inspection are summarized as under:

2.0 Salient Details:

A: General Information		
1.	Name of the unit and Address	M/s Kisan Sahkari Chini Mills Limited, Village Sheikhpur, Badaun, UP-243601
2.	Name of the Proprietor/ Contact person – Designation Contact No.	Sh. R. K. Rastogi General Manager 78808-88951
3.	Year of Comm.	1977
4.	Sector	Sugar
5.	Cane crushing capacity	1250 TCD (Ton Cane Crushed Per Day)
6.	Cane crushed	11,800 Quintals (from 18.11.2021 to 08.12.2021)
7.	Sugar produced	750 Quintals.

		(from 18.11.2021 to 08.12.2021)
8.	Molasses generation	574 Quintals (from 18.11.2021 to 08.12.2021)
9.	Press Mud generation	366 Quintals (from 18.11.2021 to 08.12.2021)
B: Water Pollution and its Control:		
1.	Water Supply Source Water Consumption (KLD)-As reported > Industrial > Domestic	Tube wells (01 no.)- 180 KLD 60 KLD
2.	Waste Water Generation (KLD)- As reported > Industrial > Domestic	180 KLD 60 KLD
3.	Waste water treated (KLD)- As reported > Industrial > Domestic	180 KLD Discharged into drain, which meet Sot River, which ultimately meet River Ganga.
4.	Details of ETP	ETP comprises of following units: a. Equalization Tank b. Tube Settler c. Aeration Tank d. Secondary Clarifier e. Multi Grade Filter f. Activated Carbon Filter g. Sludge Drying Beds h. Treated effluent storage lagoon- 3750 m ³
5.	Mode of disposal of treated effluent	As informed, treated effluent is collected in lagoon for irrigation.
6.	Flow measuring device installed at outlet of ETP	Electromagnetic Flow meter
7.	Status of Consent under the Water Act- 1974	Valid upto 31.12.2020. Applied for renewal on 10.10.2021.

B (I) Information regarding Ferti- irrigation:		
1.	Details of treatment of effluent before ferti-irrigation	Treated through ETP
2.	Command area for irrigation (available land area)	Approximately 30 Hectare (as reported)
3.	System of transportation of treated effluent upto field.	Pipeline (As reported)
4.	Formal agreements with farmers for using treated effluent	No
5.	Storage facility available for treated effluent during low demand period	Lagoons of Capacity 3750 m ³

C: Air Pollution and its Control

1.	Sources of Air Pollution	Boilers			
2.	<ul style="list-style-type: none"> ➤ Type of Fuel used ➤ Stack details with APCS 	Bagasse			
		Sl. No.	Boiler Capacity	APCS	Stack Height
		1.	20 TPH	Wet	30 m
		2.	20 TPH	Scrubber	
3.	Status of Consent under the Air Act-1981	Valid upto 31.12.2020. Applied for renewal on 10.10.2021.			

D: Waste Management

1.	Type of Waste Generated	ETP sludge, Press mud, Boiler ash & Used oil
2.	Facility of Storage/ Disposal (as reported)	<p>ETP Sludge- ETP sludge is being for landfill.</p> <p>Press Mud- Given to farmers for use as manure.</p> <p>Boiler Ash- Boiler Ash is being used in filling of low land.</p> <p>Used Oil - Mixed with bagasse and fired in boiler.</p>
3.	Disposal of waste	As above
4.	Status of Grant of authorization	Valid upto 04.04.2025.

3.0 Observations:

1. The unit has infrastructure for production of Sugar using Sugar cane as major raw material with consented capacity of 1250 TCD. During the inspection, the unit was in operation. The unit has started its cane crushing on 18.11.2021 for the current crushing season 2021-22.
2. The unit was granted Consent to Operate under the Water (PCP) Act, 1974 and the Air (PCP) Act, 1981 by UPPCB, which was valid upto 31.12.2020. The unit has applied for renewal on 10.10.2021, which violates the Water (PCP) Act, 1974 and the Air (PCP) Act, 1981 to apply Consent to Operate 90 days before expiry of consent. Further, the unit is presently operated without consent to operate from SPCB.
3. The unit has presently one (01) bore well to meet its fresh water requirement. Electromagnetic water meter is installed in bore well. The unit has not maintained log book of fresh water consumption. The unit has obtained NOC from CGWA, which was valid upto June,2020. The unit has not applied for renewal of NOC.
4. The unit has established Effluent Treatment Plant (ETP), which comprises of following:
 - a. Oil and Grease Skimmer
 - b. Equalization Tank
 - c. Tube Settler,
 - d. Aeration Tank
 - e. Secondary Clarifier
 - f. Multi Grade Filter,
 - g. Activated Carbon Filter,
 - h. Sludge Drying Beds and

i. Treated effluent storage lagoon-3750 m³

5. During inspection, effluent is received to ETP. Sample was collected from Equalization Tank, Aeration Tank and Outlet of ETP: Analysis results are presented below:

Sampling location	Parameters								
	pH	Colour (Hz)	SS (mg/L)	TDS (mg/L)	BOD (mg/L)	COD (mg/L)	O&G (mg/l)	MLSS (mg/L)	MLVSS (mg/L)
Equalization Tank	12.5	-	1341	3736	1363	2272	-	-	-
Aeration Tank	-	-	-	-	-	-	-	1083	872
Outlet of ETP	8.25	-	354	584	70	167	BDL [#]	-	-
OCEMS Value	7.25	--	23.1	--	22.1	167.9	-	--	--
Standards as per GSR 35(E), dated 14.01.2016 (For disposal on land)	5.5-8.5	--	100	2100	100	---	10	--	---

[#] below detection Range (<5 mg/l) for O&G

6. It is evident from the results that treated effluent is not meeting with stipulated norms with respect of SS parameters. MLSS and MLVSS in Aeration Tank is very low, which indicate poor Operation and maintenance of ETP.
7. Treated effluent from ETP is partially sent to Lagoon and remaining is discharged into drain, which meet Sot River, which ultimately meet River Ganga.

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8. The unit has installed OCEMS at the outlet of ETP and it was informed that OCEMS data is connected with UPPCB and CPCB server.
9. Significant variation was observed with OCEMS value and sample collected during inspection with respect of TSS and BOD parameters. It indicates that the unit is not calibrating its OCEMS.
10. Launder of Primary Clarifier was not levelled.
11. Oil and Grease Skimmer was not operational.
12. The unit has provided electromagnetic flow meter at the inlet of ETP, which was not operational during inspection.
13. The unit has provided separate energy meter for ETP and maintain log book.
14. The unit has not provided filtrate system at Sludge Drying Beds.
15. The unit has Installed Sulphur Recovery Plant for treatment of spray pond overflow, which was found non-operational and defunct.
16. The unit has provided a lagoon with capacity -3750 m³ for storage of treated effluent. The unit has reported to use of treated effluent in 30 Hectare. But, no system for use of treated effluent for irrigation and irrigation area was observed.
17. During inspection, it was observed that the unit is in the process to construct 02 lagoons for storage of raw effluent with size approx. 15 mx12mx3 m each without any permission from SPCB.
18. During inspection, it was observed that the unit has provided a bypass drain at the inlet of ETP, which was found temporary closed with soil. However, drain carrying treated effluent indicates that the unit is regularly bypassing effluent. Soil filled at inlet of ETP connected with bypass drain seems to be recently filled.
19. Sample was collected from the bypass drain. Analysis results are presented below:

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Sampling location	Parameters				
	pH	SS (mg/L)	TDS (mg/L)	BOD (mg/L)	COD (mg/L)
Bypass drain	6.59	259	730	360	648
Standards as per GSR 35(E), dated 14.01.2016. (For disposal on surface water)	5.5-8.5	30	2100	30	--

20. It is evident from the results that the unit is bypassing polluted effluent to drain through ETP inlet.

21. The unit has 02 boilers with capacity 2X20 TPH using bagasse as fuel. Emissions from Boilers are emitted through common stack of height 30 m.

Recommendations:

1. The unit should immediately dismantle bypass drain. The unit should ensure that all effluent streams are integrated and should be routed through ETP.
2. The unit should operate with valid consent under the Water (PCP) Act, 1974 and the Air (PCP) Act, 1981.
3. The unit should properly operate its ETP to meet with stipulated norms. The unit should ensure operation of all units of ETP system.
4. The unit should ensure to operate Sulphur Recovery Plant and maintain proper log book for operation of the plant.
5. The unit should maintain proper log book of fresh water consumption.
6. The unit should maintain log book of effluent generation.
7. The unit should obtain NOC from ground water abstraction.

8. The unit should properly level launder of Secondary Clarifier.
9. The unit should either dismantled additional lagoons for storage of treated/raw effluent & obtain necessary permission for construction of lagoons for storage of raw effluent.
10. The unit should provide filtrate system in Sludge Drying Beds and ensure that filtrate should be treated in ETP.
11. The unit should provide proper system for conveyance of treated effluent used in irrigation.
12. The unit should regularly calibrate its OCEMS.
13. The unit should strictly comply with the new standards notified G.S.R. 35 (E), MoEF & CC, January 14, 2016 for sugar industry such as notified standards for effluent disposal, waste water conservation and pollution control management.

Inspection Team:

1. Sh. Runa Oraon, Sc. 'D', CPCB, RD(N), Lucknow
2. Sh. Jitendra Lal, AEE Regional Office, UPPCB, Bareilly

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Figure 1- Equalization Tank

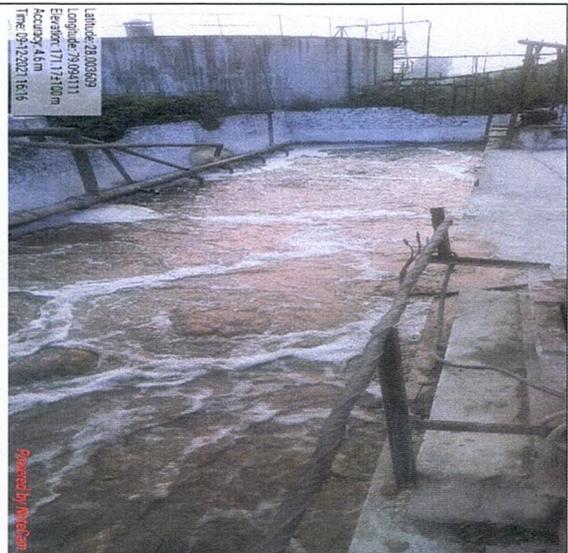


Figure 2- Aeration Tank

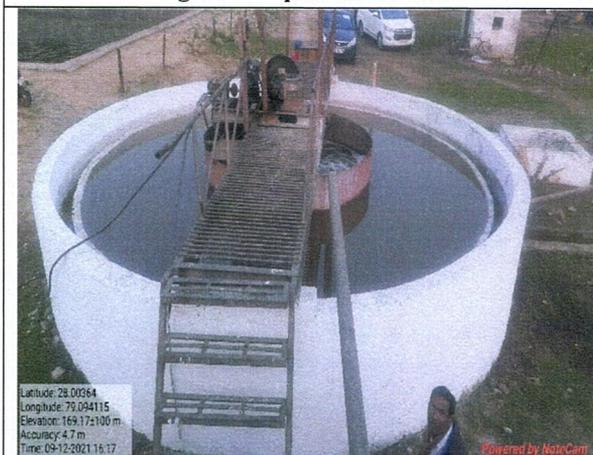


Figure 3 Secondary Clarifier

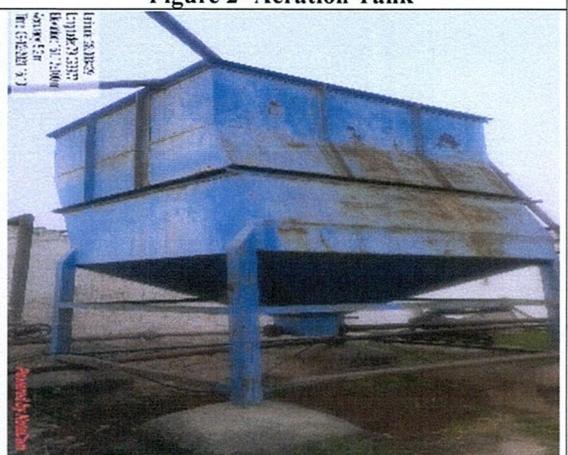


Figure 4 Tube Settler

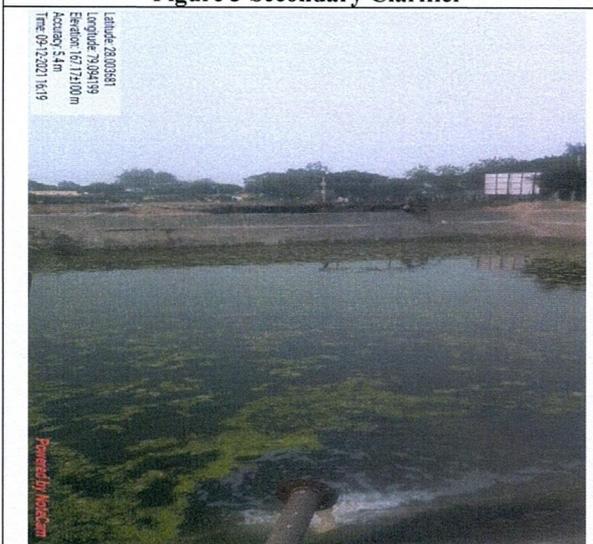


Figure 5 Treated Effluent Storage Lagoon

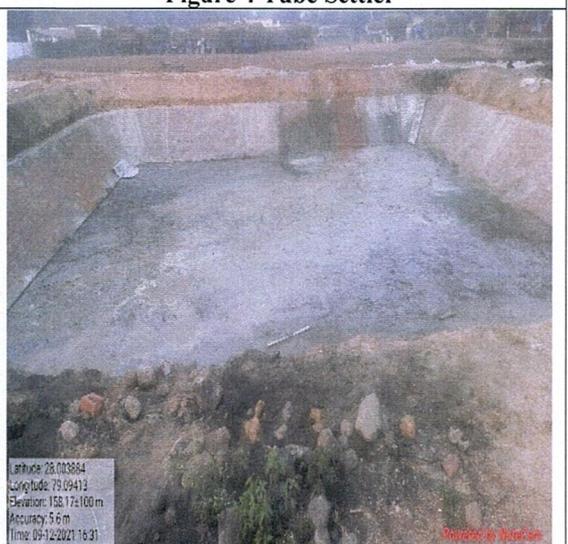


Figure 6 Raw effluent storage lagoon-1



Figure 7 Raw effluent storage lagoon-2



Figure 8 Bypass Drain filled with soil

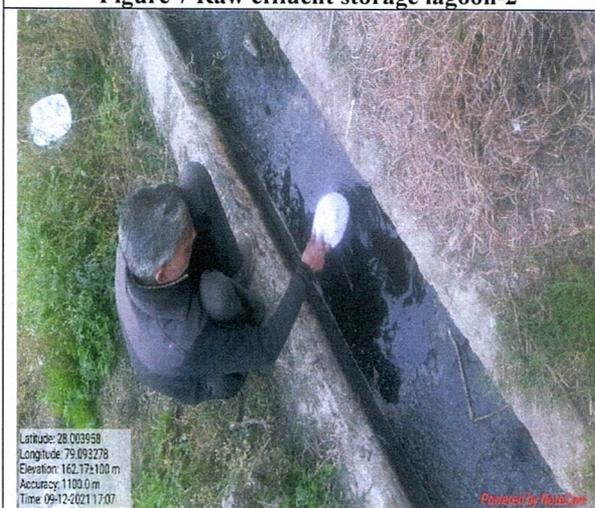


Figure 9 Final Drain

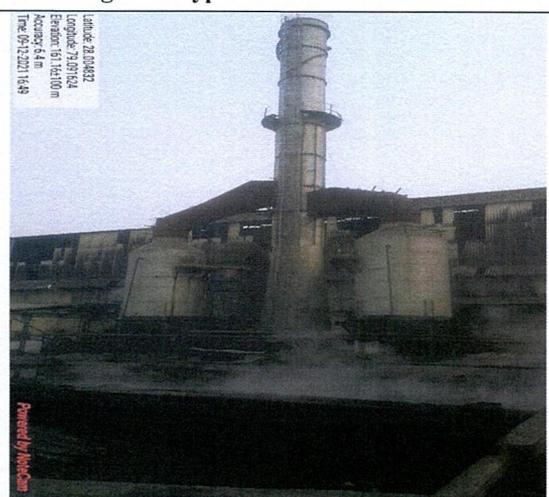


Figure 10 Boiler Stack

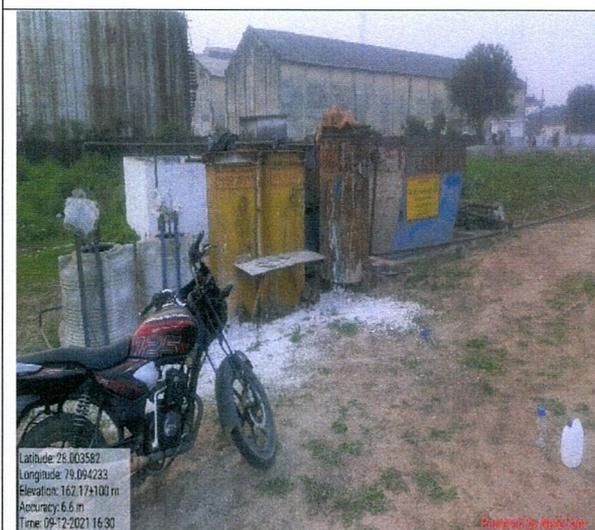


Figure 11 Sulphur Recovery Plant



Figure 12 Flow meter at Borewell