JOINT INSPECTION REPORT OF BISALPUR KISAN SAHKARI CHINI MILLS LIMITED, BISALPUR, PILIBHIT (UTTAR PRADESH)

In the matter of

M/s Kisan Sahkari Chini Mills Ltd.

Vs

Member Secretary, U.P. Pollution Control Board & Ors.

(Appeal No. 23/2020)

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. 23/2020), inspection of Bisalpur Kisan Sahkari Chini Mills Limited, Bisalpur, Pilibhit, UP (hereafter referred as "the unit") was carried out by a joint team of CPCB, Regional Directorate, Lucknow and UPPCB, Regional Office, Bareilly on 08.12.2021. 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 Bisalpur Kisan Sahkari Chini Mills Limited, Bisalpur, Pilibhit, UP-262201
2.	Name of the Proprietor/ Contact person – Designation Contact No.	Sh. S.L. Pal General Manager 7880888961
3.	Year of Comm.	1976
4.	Sector	Sugar (Co-operative)
5.	Cane crushing capacity	2500 TCD (Ton Cane Crushed Per Day)
6.	Cane crushed	329200 Quintals (from 23.11.2021 to 07.12.2021)
7.	Sugar produced	19300 Quintals (from 23.11.2021 to 07.12.2021)

8.	Molasses generation	13603 Quintals (from 23.11.2021 to 07.12.2021)
9.	Press Mud generation	1062 Quintals (from 23.11.2021 to 07.12.2021)
B: Water Pollution and its Control:		
1.	Water Supply Source Water Consumption (KLD)- As reported ➢ Industrial ➢ Domestic	Tube wells-02 nos. (Only one in operation) (Avg. from 23.11.2021 to 08.12.2021) Approx.258 Approx.100
2.	Waste Water Generation (KLD)- As reported ➢ Industrial ➢ Domestic	(Avg. from 23.11.2021 to 08.12.2021) Approx.258 Approx.100
3.	Waste water treated (KLD)- As reported ➢ Industrial ➢ Domestic	(Avg. from 23.11.2021 to 08.12.2021) Approx.258 Discharged into Garha nalla, which meet to Katna River. Katna River meet River Garra, which ultimately meet River Ganga.
4.	Details of ETP	ETP comprises of following units: a. Bar Screens b. Oil and Grease Trap c. Equalization Tank d. Primary Clarifier e. Aeration Tank f. Secondary Clarifier g. Multi Grade Filter, h. Activated Carbon Filter and i. Sludge Drying Beds. j. Treated effluent storage lagoon-5800 m^3
5.	Mode of disposal of treated effluent	As informed, treated effluent is collected in lagoon for irrigation in its own land and used in wet scrubber. However, during inspection, no treated effluent was found

<table>
<tr><td></td><td></td><td>being sent to lagoon and raw effluent was observed being bypassed into Garha nalla, which meet to Katna River. Katna River meet River Garra, which ultimately meet River Ganga.</td></tr>
<tr><td>6.</td><td>Flow measuring device installed at outlet of ETP</td><td>"Yes"
Electromagnetic Flow meter</td></tr>
<tr><td>7.</td><td>Status of Consent under the Water Act- 1974</td><td>Valid upto 31.12.2020. Applied for renewal on 11.11.2021.</td></tr>
<tr><td colspan="3">B (I) Information regarding irrigation:</td></tr>
<tr><td>1.</td><td>Details of treatment of effluent before ferti-irrigation</td><td>Treatment of Effluent at ETP</td></tr>
<tr><td>2.</td><td>Command area for irrigation (available land area)</td><td>69.16 Hectare (as reported)</td></tr>
<tr><td>3.</td><td>System of transportation of treated effluent upto field.</td><td>Not available</td></tr>
<tr><td>4.</td><td>Formal agreements with farmers for using treated effluent</td><td>Yes (as reported)</td></tr>
<tr><td>5.</td><td>Storage facility available for treated effluent during low demand period</td><td>Treated effluent storage lagoon-5800 m^3</td></tr>
<tr><td>6.</td><td>Quality of Effluent being used for ferti-irrigation</td><td>At present unit is not using treated effluent for irrigation</td></tr>
<tr><td>7.</td><td>Groundwater monitoring network</td><td>Monitoring by piezometer</td></tr>
<tr><td colspan="3">C: Air Pollution and its Control</td></tr>
<tr><td>1.</td><td>Sources of Air Pollution</td><td>Boilers</td></tr>
<tr><td>2.</td><td>➢ Type of Fuel used
➢ Stack details with APCS</td><td>Bagasse-32TPH
<table>
<tr><th>Sl. No.</th><th>Boiler Capacity</th><th>APCS</th><th>Stack Height</th></tr>
<tr><td>1.</td><td>20 TPH</td><td rowspan="2">Wet Scrubber</td><td rowspan="2">30 m (Common StacK)</td></tr>
<tr><td>2.</td><td>20 TPH</td></tr>
<tr><td>3.</td><td>30 TPH</td><td>Wet Scrubber</td><td>30 m</td></tr>
</table></td></tr>
<tr><td>3.</td><td>Status of Consent under the Air Act- 1981</td><td>Valid upto 31.12.2020. Applied for renewal on 11.11.2021.</td></tr>
</table>

D: Waste Management		
1.	Type of Waste Generated	ETP sludge, Press mud, Boiler ash & Used oil
2.	Facility of Storage/ Disposal (as reported)	**ETP Sludge-** ETP sludge is being used as manure **Press Mud-** Given to farmers for use as manure **Boiler ash-** Boiler Ash is being used in filling of low land area on demand of farmers. **Used oil**- is mixed with bagasse and fired in boiler.
3.	Disposal of waste	As above
4.	Status of Grant of authorization	Valid upto 01.06.2025.

3.0 Observations:

1. The unit has infrastructure for production of Sugar using Sugar cane as major raw material with consented capacity of 2500 TCD. During the inspection, the unit was in operation. The unit has started its cane crushing on 23.11.2021 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 11.11.2021, 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 two (02) bore wells to meet its fresh water requirement. Electromagnetic water meter is installed in one bore well. The unit has not maintained proper log book of fresh water consumption as meter reading in flow meter and log book are not matching. As informed by the unit representative, one

borewell is not in use. The unit has obtained NOC from CGWA, which was valid upto 27.02.2020. The unit has applied for renewal of NOC on 26.02.2021 from CGWA, which is yet to be granted.

4. The unit has established Effluent Treatment Plant (ETP), which comprises of following:
   a. Oil and Grease Trap
   b. Equalization Tank
   c. Primary Clarifier
   d. Aeration Tank
   e. Secondary Clarifier
   f. Multi Grade Filter,
   g. Activated Carbon Filter,
   h. Sludge Drying Beds and
   i. Treated effluent storage lagoon-5800 m^3
5. During inspection, effluent is received to ETP and only Equalization Tank, Primary Clarifier and Aeration Tank of ETP were in operation. Sample was collected from Equalization Tank and Aeration Tank of ETP. Analysis results are presented below:

Sampling location	Parameters						
	pH	SS (mg/L)	TDS (mg/L)	BOD (mg/L)	COD (mg/L)	MLSS (mg/L)	MLVSS (mg/L)
Equalization Tank	4.29	343	1107	912	1692	-	-
Aeration Tank	-	-	-	-	-	**171**	**148**

6. It is evident from the results that ETP is not stabilized as MLSS and MLVSS are very low.

AEE

7. During inspection, no overflow from Aeration Tank to Secondary Clarifier was observed.
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. Launder of Primary and Secondary Clarifier was not levelled.
10. During inspection, it was observed that effluent drain to ETP is damaged at several place. Due to this, overflow effluent is found stagnant near ETP.
11. The unit has not provided separate energy meter for ETP.
12. The unit has not provided filtrate system at Sludge Drying Beds.
13. The unit has provided electromagnetic flow meter at the inlet and outlet of ETP. Treated effluent from the unit on 07.12.02021(as per log book) was observed as 217 litre per ton of cane crushed as against stipulated norms of 100 litre per ton of cane crushed.
14. The unit has Installed Sulphur Recovery Plant for treatment of spray pond overflow, which was found non-operational. As informed by the unit representative, due to no overflow from spray pond Sulphur Recovery Plant was non-operational. The unit has provided flow meter at Sulphur Recovery Plant.
15. It was also informed that the unit was non-operational due to power problem in the last 08 hours and resume production at 11.00 AM on date of inspection.
16. The unit has provided a lagoon with capacity -5800 m^3 for storage of treated effluent. During inspection, no treated effluent is sent to lagoon. The unit has reported to use of treated effluent in 69.16 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 has provided a bypass drain on back side of the unit. Bypass drain is meeting to Garha nalla, which meet to Katna River. Katna River meet River Garra, which ultimately meet River Ganga.

AEE

18. Sample was collected from the bypass drain. Analysis results are presented below:

Sampling location	Parameters					
	pH	SS (mg/L)	TDS (mg/L)	BOD (mg/L)	COD (mg/L)	Oil & Grease(mg/L)
Bypass Drain	4.49	64.1	897	480	852	6.85

19. It is evident from above results that unit is discharging untreated and polluted effluent into Garha nalla through bypass drain.

20. During inspection, it was observed that a municipality drain(Garha nalla) was passing adjacent to the unit. Sample of drain was collected before and after the unit. Analysis results are presented below:

Sampling location	Parameters					
	pH	Colour (Hz)	SS (mg/L)	TDS (mg/L)	BOD (mg/L)	COD (mg/L)
Drain sample (before the unit near police chowki)	7.10	125	82.8	1071	84.4	162
Drain sample (after the unit near railway line)	7.06	100	48.8	803	43.6	80.4

21. The unit has 03 boilers with capacity 2X20 TPH and 1X30 TPH using bagasse as fuel. Emissions from Boiler with capacity 20 TPH is emitted through common stack of

AEE

height 30 m. Similarly, emission from boiler with 30 TPH is emitted through stack of height 30 m. Monitoring platform in both stacks was not as per CPCB guidelines.

Recommendations:

1. The unit should immediately dismantle bypass drain. The unit should ensure that all effluent streams are integrated and routed through ETP.
2. The unit should install electromagnetic flow meter in both the borewells and maintain proper log book of fresh water consumption.
3. The unit should operate with valid consent under the Water (PCP) Act, 1974 and the Air (PCP) Act, 1981.
4. The unit should expediate to obtain NOC from ground water abstraction expired on 27/02/2020.
5. The unit should properly operate its ETP. The unit should ensure operation of all units of ETP system. The unit should maintain proper log book for ETP operation.
6. The unit should restrict the treated effluent generation as per stipulated norms.
7. The unit should properly level launder of Primary and Secondary Clarifier.
8. The unit should provide proper stack monitoring facilities as per CPCB guidelines.
9. The unit should provide filtrate system in Sludge Drying Beds and ensure that filtrate should be treated in ETP.
10. The unit should provide separate energy meter for operation of ETP.
11. The unit should ensure to properly operate Sulphur Recovery Plant and maintain proper log book for operation of the plant.
12. The unit should provide proper system for conveyance of treated effluent used for irrigation.
13. The unit should repair effluent carrying drain to ETP and ensure no overflow of effluent into land/low lying area.
14. The unit should regularly calibrate its OCEMS.

15. 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

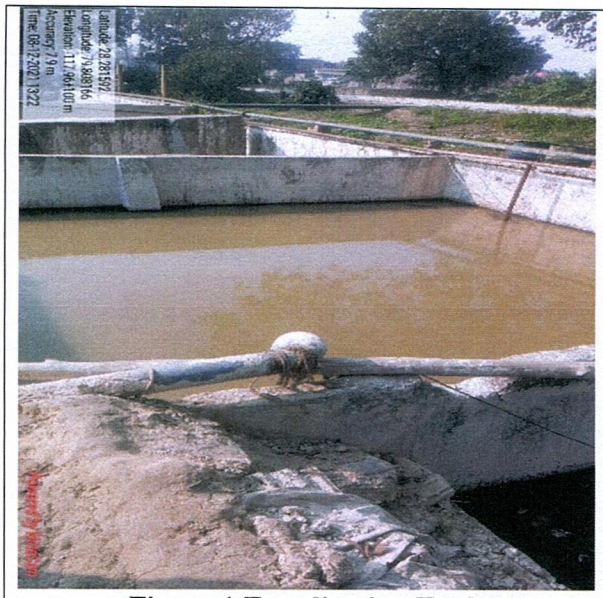

Figure 1 Equalization Tank

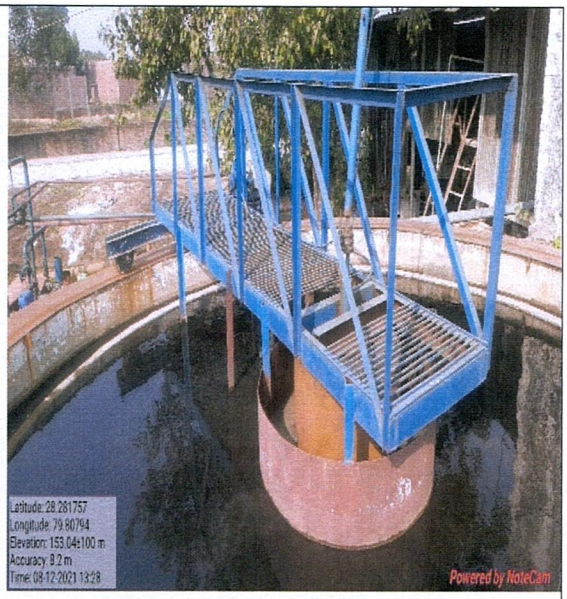

Figure 2 Primary Clarifier

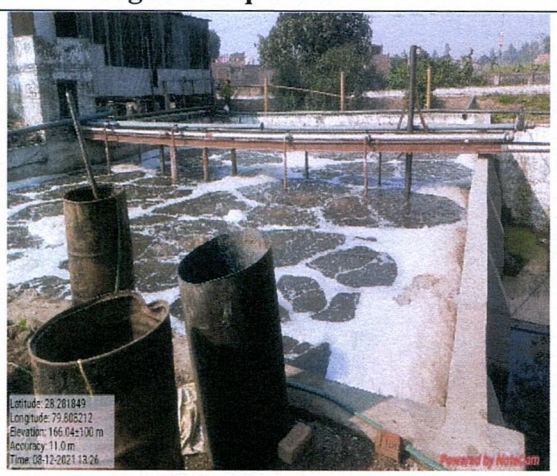

Figure 3 Aeration Tank

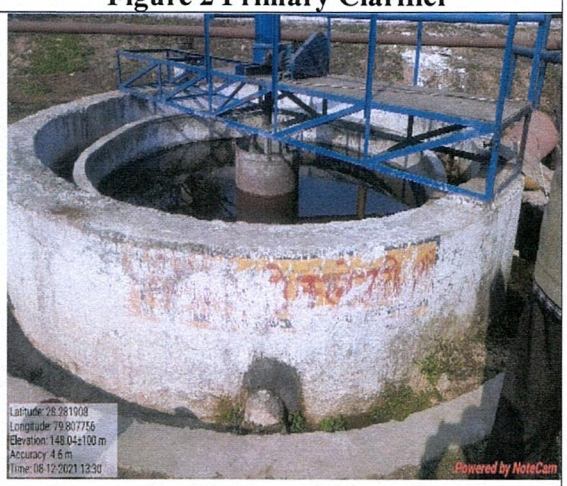

Figure 4 Secondary Clarifier

Figure 5 Treated effluent Lagoon

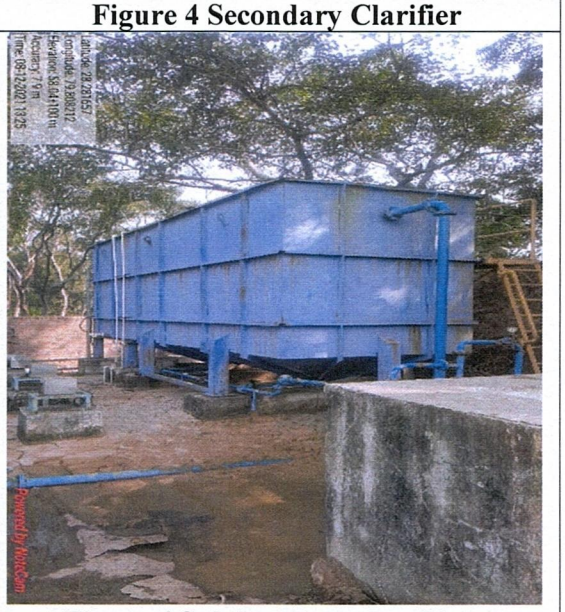

Figure 6 Sulphur Recovery Plant

Figure 7 ETP drain

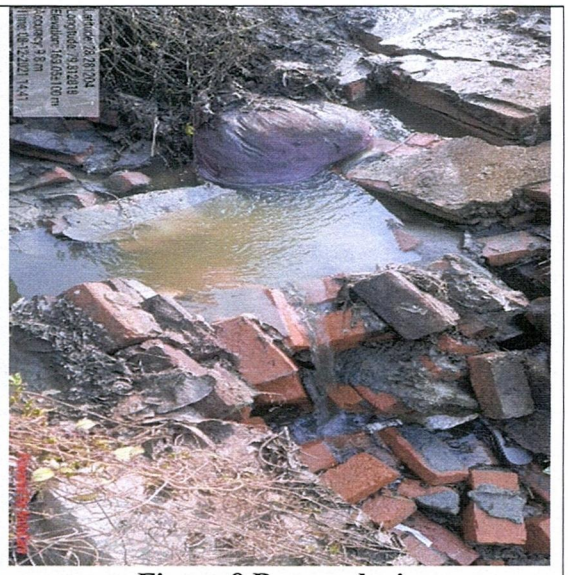

Figure 8 Bypass drain

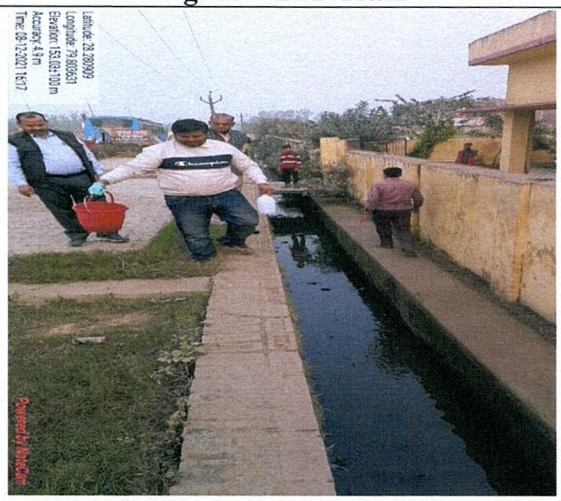

Figure 9 Drain -Near Police Chowki

Figure 10 Drain (d/s) Near Railways Track

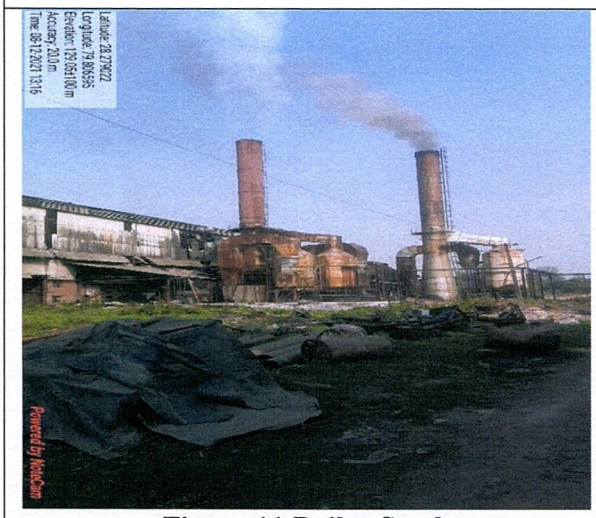

Figure 11 Boiler Stack

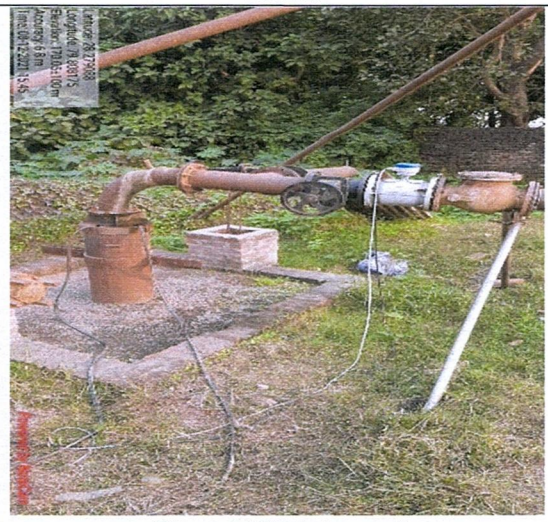

Figure 12 Tube well