

Joint Inspection Report of Six Industries and River Neera Located in District Pune and Satara with Reference to the Order Passed by Hon'ble NGT, Delhi in the Matter OA No. 555 of 2019

1. BACKGROUND:

Hon'ble NGT (Principle Bench, Delhi) passed an order on 13.08.2019 in the matter of Rahul Hanumant Chauhan vs. State of Maharashtra (OA No 555 of 2019). In the said order, District Magistrates, Pune and Satara, Maharashtra Pollution Control Board (MPCB) and Central Pollution Control Board (CPCB) were jointly asked to furnish a factual and action taken report in the matter. The matter was related to allegation by the applicant that pollution is being caused by M/s. Shri Ram Sugar Factory, Govind Milk & Milk Products, Maharashtra Food Limited, Malegaon Sugar Factory by discharging harmful chemicals in River Neera in Pune and Satara Districts, affecting the fields of the agriculturalists in the nearby areas in villages Sangvi, Shirvali, Khandj, Nirwagaj. MPCB was appointed as Nodal Agency for compliance and co-ordination.

In accordance with the order, following officials of MPCB, CPCB and nominated officers of District Magistrate Pune and Satara jointly visited the industries (mentioned in the order) and carried out survey / monitoring of River Neera and surrounding areas on dated 23.09.2019 & 24.09.2019.

1. Shri Pratap Jagtap, Sub-Regional Officer, MPCB, Pune-1
2. Shri Limbaji Bhad Sub-Regional Officer, MPCB, Satara
3. Dr. N. Semwal, Scientist-B, Regional Directorate (West), CPCB, Vadodara
4. Shri Vijay Patil, Tahsildar, Baramati – Representative of District Magistrate, Pune
5. Shri, Shivaji Jagtap, SDO, Phaltan – Representative of District Magistrate, Satara

2. METHODOLOGY

The four industrial units mentioned in the order (in fact total six units as each sugar unit has associated distillery unit) and course of River Neera flowing through the area of these industries falls under the jurisdiction of Pune and Satara Districts and accordingly officials of MPCB and officers of district administration joined for the visit as per their jurisdiction. Industrial units were visited to assess their water / wastewater management status and samples of wastewater were also collected from and around the units as per rational

requirement. Samples of River Neera were also collected from 03 locations which were considered as probable impact locations. The water / wastewater samples collected during the entire visit were analyzed at MPCB laboratory Pune.

The team first visited industries and area falling under the jurisdiction of District Pune on 23.09.2019 and subsequently industries and area falling under the jurisdiction of District Satara were visited on 24.09.2019. Google image depicting locations of industries and sampling locations is given at Annexure-1 of this report. Industry wise status of water / wastewater management is as follows:

3. M/S MALEGAON SSK LTD. (SUGAR & CO-GENE.), TAL. BARAMATI, DISTT. PUNE:

The unit is located at A/p – Shivnagar, Tal. Baramati, Distt. Pune. The CC&A issued by MPCB on 07.02.2019 was valid for a period from 01.08.2018 to 31.07.2019. The unit has applied online for renewal of CC&A on 28.05.2019 but the same has not been disposed by MPCB as yet.

The unit was not in operation during the visit due to non-crushing season. It is gathered during discussion that unit will start operation from November 2019 onwards with the onset of cane crushing season. Shri Dinesh K. Darekar, Env. Officer of the unit was present during the visit and provided necessary information.

The present capacity of unit is 4000 TCD (ton cane crushing per day) and the unit is intending for expansion and has obtained Consent to Establish from MPCB on 19.07.2019 for further 4250 TCD, thus total capacity will go up to 8250 TCD. During previous season (163 season days), total quantity of cane crushed was 1072519 MT and total quantity of various grade sugar manufactured was 126110 MT.

3.1 Water and wastewater management:

The fresh water source for the unit is Nira Left Canal. As per the CC&A, total water consumption is 1320 m³/ day (1310 m³/ day for industrial purpose and 10 m³/ day for domestic purpose) and permitted quantity of discharge is 718 m³/ day (710 m³/ day trade effluent and 8 m³/ day domestic effluent) . During last crushing season, the unit utilized average 673 m³/ day of fresh water and as per flow meter record of December 2018, the unit discharged average 197 m³/ day from ETP.

As per CC&A, the unit has provided ETP of 1000 m³/ day which is upgraded from 600 m³/ day in view of expansion of capacity. The ETP was not operational during the visit due to non-operation of the industry.

The ETP comprises of following units:

Oil & Grease Chamber → Collection Tank → Neutralization Tank → Primary Clarifier → Anaerobic Filter Media → Aeration Tanks (03 Nos.) → Secondary Clarifier → Collection Sump → Pressure Sand Filter Activated Carbon Filter → Discharge for irrigation

As per the CC&A condition, the treated effluent shall be disposed on land for irrigation on 49.5 acres of own land / as per the bilateral agreement with farmers. The unit is having bilateral agreements with nearby farmers for 51.74 Acres. Reportedly, the farmers belonging to Shirawali village are share holders with the Karkhana. The unit has submitted the list of farmers with the copy of agreement to MPCB and the same was provided to the visiting team also.

The unit has not provided 15 days storage tank for treated effluent to take care of no demand for irrigation as per CREP condition mentioned in the CCA.

MPCB had carried out sampling of finally treated effluent from ETP during the last crushing season during their routine inspections. The analysis results are given in the table below:

Sampling location: Final outlet of ETP

Date of sampling	pH	SS	TDS	COD	BOD	O&G	Chlorides	Sulphate
14/12/2018	8.3	54	1128	472	160	8.9	239.9	7.5
11/01/2019	8.2	40	1144	560	185	4.6	309.9	26
14/03/2019	8.6	60	--	96	35	BDL	--	--
MPCB Standards	5.5-9	100	2100	250	100	10	600	1000

The analysis results for the samples collected on 14/12/2018 & 11/01/2019 shows that the parameter BOD & COD are exceeding the prescribed standards mentioned in MPC Board's Consent order.

4. M/S MALEGAON SSK LTD. (DISTILLERY), TAL. BARAMATI, DISTT. PUNE:

The unit is located at Shivnagar, Tal. Baramati, Distt. Pune. The sugar and distillery units are governed through single management only and accordingly Shri Dinesh K. Darekar, Env. Officer of the unit was present during this visit also to provide necessary information.

The unit was not operational during visit reportedly due to non-availability of molasses from sugar units. In last crushing season, the unit operated during 21.12.2018 to 28.06.2019. As per CC&A, the capacity of unit is 60 KLPD. As per the record, the unit has produced

10576.198 KL alcohol, Avg. 55.958.KLPD and average spent wash generation per KL alcohol production is 7.91 cubic meter.

The CC&A issued by MPCB on 14.01.2019 was valid for a period from 01.07.2018 to 31.08.2019. The unit has applied online for renewal of CC&A on 29.05.2019 but the same has not been disposed by MPCB as yet.

4.1 Water and wastewater management:

As per the CC&A, fresh water consumption quantity is 630 M³/Day (580M³/Day for industrial purpose and 50 M³/Day for domestic purpose) and permitted quantity of discharge is 620 M³/Day (580 M³/Day trade effluent and 40 M³/Day domestic effluent).

As per the record provided, total spent wash generation during the last season is 83741.6 M³, MEE feed is 6353 M³, condensate generation is 4614.63 M³, concentrated spent wash generation is 1738.37 M³ and compost production is 33536.26 MT. Reportedly, MEE was operated only for 24 days due to insufficient steam from the boiler and therefore 77388.6 M³ of spent wash was directly used for composting after bio-methanation. The unit has produced bio-gas to the tune of 778400 M³ and reportedly the gas is used as fuel in the boiler. The fresh water consumption during last season is 89946.5 M³ i.e. 478 M³/Day.

As per the CCA condition, the unit should have impervious tank of 30 days holding capacity and the composting site shall be made as per guideline. In this regard the unit has provided following treatment system for treating the spent wash to achieve Zero Liquid Discharge.

A bio-gas reactor (Bio-methanation) followed by Multiple Effect Evaporator (MEE). The concentrate from the MEE is stored in a storage lagoon and further used for composting in the compost yard on 8.0 acre land (as per CCA). The condensate from MEE is further treated in condensate polishing unit (CPU). It is informed that spentleese and other utility effluent is also treated in the CPU.

The CPU comprises of following units:

Cooling Tower → Neutralization Tank → Equalization Tank → UASBR Digester → Aeration Tanks → Clarifier → Filter Feed Tank → Sand Filter & Carbon Filter → UF Filter → Used in Fermenter and other process utility.

The storage lagoon was observed almost fully filled (**Photograph given below**) with the spent wash. It is informed that the spent wash stored in the lagoon could not be utilized in the compost yard due to non-availability of filler materials (press mud and other agricultural waste) from the sugar unit. The compost yard is fully concreted with leachate collection facility (**Photograph given below**). However, the team has collected 02 ground water

samples from the nearby area of storage lagoon and compost yard (sampling location depicted on google image at **Annexure-1**) to ascertain status of ground water quality in view of probable contamination from the storage lagoon / compost yard. The analysis reports are as below:

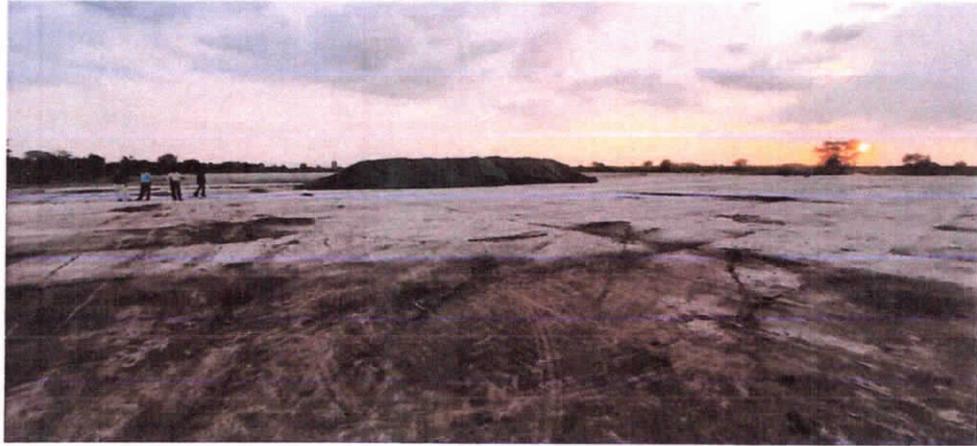
Sampling Location	pH	SS	TDS	COD	BOD	Cl ⁻	SO ₄ ⁻²	F ⁻	PO ₄ -P	Na
Bore well from farm of Shri Shantkumar Shaha, Gat No. 139	7.9	14	728	8.0	2.8	140	272	1.3	0.06	56.2
Bore well from the farm of Shri Shivaji near Malegaon sugar factory.	7.9	12	746	12.0	4.2	84	276	0.9	0.13	5.3

Units of the parameters is mg/l except pH

The analysis results do not indicate contamination in water quality from storage lagoon/ compost yard.



Storage lagoon filled with spent wash



Compost yard

4.2 Conclusion on status of water / wastewater management in M/s Malegaon SSK Ltd. (Sugar & Co-gene.) and M/s Malegaon SSK Ltd. (Distillery):

- Both the units are not having valid CCA at present and therefore MPCB must ensure that the units do not start operation without obtaining valid CCA.
- M/s Malegaon SSK Ltd. (Sugar & Co-gene.) is expanding the capacity by more than two fold (4000 TCD to 8250 TCD) and accordingly effluent generation will also increase, therefore unit should be asked for providing provisions for land requirement for irrigation to cater the demand. MPCB should assess the CC&A keeping this aspect in consideration. Further, the unit needs to provide 15 days storage capacity for treated effluent to take care of no demand for irrigation as per the CREP guidelines mentioned in the CCA.
- As per the record of distillery unit for the last season, the MEE is operated for 24 days only which resulted in treatment of only about 8% spent wash in MEE and rest 92% is directly taken for compost after biomethanation. The unit needs to ensure optimum MEE operation so that all the generated spent wash is treated in MEE before using it for composting.
- Kalaodha drain is flowing near the unit premises which finally converge in River Neera. The drain was having substantial flow with appearance of some muddy colour in it on the visit day, probably due to heavy rain in the area on previous night. No visible effluent discharge in Kalaodha drain was observed during the visit but it is gathered during interaction with some local people that this drain carries industrial effluent on some occasion when the sugar and distillery units are in operation. The team has collected grab sample of Kalaodha drain just before confluence to River Neera in view of assessing the chemical characteristics of the drain, particularly

during non-operational period of the industrial units. Analysis results are given in the table below.

Sampling location	pH	TSS	TDS	COD	BOD	O&G	SO ₄ ⁻²	Cl ⁻
Kala Odha Nala at Vitthalwadi before confluence to Rver Neera	8.5	44	820	28	10	BDL	272	140

- The analysis results shows that there is no contamination from industrial effluent (sugar and distillery), however concentration of TDS and COD is slightly higher which may be attributed to runoff from nearby agricultural fields along with rain water.
- MPCB needs to monitor Kalaodha drain regularly (preferably on fortnightly) when the Malegaon sugar and distillery units are in operation to assess the actual status during that period.

5. M/S SHRIRAM JAWAHAR SSK UDYOG (SUGAR UNIT), TAL. PHALTAN, DISTT. SATARA:

The unit is located at Sr. No. 6,9 / 2, 10,11,13 / 1A, Ramnagar, Tal. Phaltan, Distt. Satara. The CC&A issued by MPCB on 03.09.2016 was valid for a period from 01.08.2016 to 31.07.2019. The unit has applied online for renewal of CC&A on 21.06.2019 but the same has not been disposed by MPCB as yet. The consented capacity of the unit is 2000 TCD (ton cane crushing per day).

The unit was not in operation during the visit due to non-crushing season. Mr. M.A. Patil, I/c Project Manager of the unit was present during the visit and provided necessary information.

It is gathered during discussion that unit will start operation from November 2019 onwards with the onset of cane crushing season. During previous season (148 season days), total quantity of cane crushed was 4390675 Qtls. and total quantity of various grade sugar manufactured was 505260 Qtls.

5.1 Water and wastewater management:

The fresh water source for the unit is Neera Canal. As per the CC&A, total water consumption is 530 m³/ day (510 m³/ day for industrial purpose and 20 m³/ day for domestic purpose). As per the water bills provided, during last crushing season, the unit

utilized average 244 m³/ day of fresh water and as per record of online flow meter provided, the unit has discharged average 182 m³/ day treated effluent during January to March 2019 from ETP.

As per CC&A, the unit has provided ETP of 250 m³/ day, however as per the ETP details provided by the unit, the ETP design capacity is 1000 m³/ day. The ETP was not operational during the visit due to non-function of the industry.

The ETP comprises of following units:

Oil & Grease Chamber → Holding Tank → Equalization Tank → Anaerobic Tank → Aeration Tanks (03 Nos.) → Clarifier → Treated Effluent Sump → Discharge for Irrigation

Though the ETP was not operational during visit, however, the physical condition of different units in ETP appeared scientifically overlooked. Oily sludge and effluent was found stored in oil & grease (O&G) chamber, holding tank, equalization tank. The oil & grease chamber is covered with long grasses, indicating either huge sludge is stored in it or the flooring of O&G chamber is not concreted. The holding tank, equalization tank and anaerobic tanks are different nomenclature for simple effluent storage tank without any scientific design. Provision for sludge removal from these tanks is not provided.



Condition of Oil & Grease Chamber

As per the CC&A condition, the treated effluent shall be recycled / reused to the maximum extent in the process and rest shall be used for irrigation / gardening only. Further, the industry shall have bilateral agreement with the farmers on whose land the treated effluent is used for irrigation purposes. The CCA also mentioned about providing 15 days storage tank for treated effluent to take care of no demand for irrigation as per CREP condition.

The unit has submitted copy of bi-lateral agreements with nearby farmers for 20 Acres land. The unit has not provided 15 days storage lagoon as per the CCA condition. Two kachha storage lagoon filled with effluent were observed behind the unit premises. It is understood that the unit is discharging the treated effluent into these kachha lagoons. The same observations were recorded by MPCB also during their visit to the unit on 03.09.2019.

During the last crushing season, MPCB had carried out sampling of finally treated effluent from ETP on 28.01.2019 and 28.02.2019 during their routine inspections. The analysis results are given in the table below:

Sampling location: **Final outlet of ETP**

Date of sampling	pH	TSS	TDS	COD	BOD	O&G	SO ₄	Cl ⁻
28.01.19	7.4	252	420	584	185	16.2	36.4	39
28.02.19	7.7	132	496	440	118	1.8	14	69
CCA prescribed standards	5.5 – 9.0	100	2100	250	100	10	1000	600

The analysis results shows that the treated effluent is exceeding the CCA prescribed standards with respect to TSS, COD and BOD on both occasions and O&G during 28.01.2019.

6. M/S SHRIRAM SSK LTD. (DISTILLERY), TAL. PHALTAN, DISTT. SATARA:

The unit is located at Nira Valley Arkshala Vibhag, Tal. Phaltan, Distt. Satara. The unit was not operational during visit, reportedly due to non-availability of raw material i.e. molasses Mr. A.S. Vare, Manager of the unit was present during the visit to provide necessary information.

The CC&A issued by MPCB on 22.03.2017 was valid for a period from 01.09.2016 to 31.08.2019. The unit has applied online for renewal of CC&A on 17.07.2019 but the same has not been disposed by MPCB as yet.

As per CC&A, the capacity of the unit is 30 KLPD. As per the record provided, average production during April 2018 to March 2019 was 16 KLPD.

6.1 Water and wastewater management:

As per the CC&A, fresh water consumption quantity is 363 M³/Day (333 M³/Day for industrial purpose and 30 M³/Day for domestic purpose) and permitted quantity of discharge is 290 M³/Day (265 M³/Day trade effluent and 25 M³/Day domestic effluent).

As per the record of the unit, average fresh water consumption during April 2018 to March 2019 is 847 M³/Day. During the same period, the unit has generated 48401.54 M³ i.e. 132 M³/Day of spent wash. Average spent wash generation per KL of Alcohol production is 8.25 KL.

As per the CCA condition, the unit should have impervious storage tank of 30 days holding capacity and the composting site shall be made leak proof by proper lining. The unit has provided Bio-digester (Bio-methanation) followed by storage lagoon and bio-composting yard on 6.5 acres land (as per CCA) for achieving ZLD. As per the record provided, the unit has produced 2925000 Nm³ of gas (reportedly used as fuel in boiler) and 8580 MT of compost during 01.04.2018 to 31.03.2019.

The storage lagoon was observed almost fully filled with the spent wash. It is informed that the spent wash stored in the lagoon could not be utilized in the compost yard due to non-availability of filler materials (press mud and other agricultural waste) from the sugar unit. The compost yard is fully concreted with leachate collection facility.



Storage lagoon



Compost yard

Further, as per CCA, the unit has to provide ETP for treatment of spentleese, utility effluent and evaporator condensate and recycle / reuse in process but the same is not provided by the unit.

6.2 Conclusion on status of water / wastewater management in M/s Shriram Jawahar SSK Udyog (Sugar Unit) and M/s Shriram SSK Ltd. (Distillery):

- Both the units are not having valid CCA at present and therefore MPCB must ensure that the units do not start operation without obtaining valid CCA.
- Effluent treatment system in both the units is inadequate.
- M/s Shriram Jawahar SSK Udyog (Sugar Unit) needs to upgrade the existing ETP scientifically so that proper treatment of effluent can be ensured and also the unit should scrape the kachha lagoons which are used for storage of effluent and needs to provide 15 days storage capacity tank for treated effluent to take care of no demand for irrigation as per the CREP guidelines.
- M/s Shriram SSK Ltd. (Distillery) needs to provide ETP for treatment of spentleese, utility effluent and evaporator condensate. Treated wastewater should be reused completely within the process / premises and maintain the record of same.

- Khadakhira Nala is flowing near to the unit premises of both the units which finally converge in River Neera. The Nala was having substantial flow with some muddy colour appearance on the visit day, probably due to heavy rain in the area on previous night. No visible effluent discharge in Khadakhira drain was observed during the visit. The team has collected grab sample of Khadakhira Nala before confluence to River Neera in view of assessing the chemical characteristics of the drain, particularly during non-operational period of the industrial units. Analysis results are given in the table below.

Sampling location	pH	TSS	TDS	COD	BOD	DO	O&G	SO ₄ ⁻²	Cl ⁻
Khadakhira Nala at Somanthali B/F confluence to River Neera	8.3	40	496	16	5.6	5.7	BDL	153.2	14

- The analysis results shows that there is no contamination from industrial effluent (sugar and distillery).
- MPCB needs to monitor Khadakhira Nala regularly (preferably on fortnightly) when the units M/s Shriram Jawahar SSK Udyog (Sugar Unit) and M/s Shriram SSK Ltd. (Distillery) are in operation to assess the actual status during that period.

7. M/S GOVIND MILK & MILK PRODUCTS, TAL. PHALTAN, DISTT. SATARA

The unit is located at Gat. No. 93,94 & 95, A/p Kolki, Tal. Phaltan, Distt. Satara. The CC&A issued by MPCB on 30.10.2018 was valid for a period from 01.05.2015 to 30.04.2019.

The unit is engaged in manufacturing of pasteurized, concentrated milk and milk related products. The unit was operational during the visit. Miss Reshma Jadhav, I/c ETP of the unit was present during the visit and provided necessary information.

7.1 Water and wastewater management

As per CC&A, total water consumption of the unit is 660.5 M³/Day (650 M³/Day for industrial purpose and 10.5 M³/Day for domestic purpose) and total effluent generation is 473.5 M³/Day (465 M³/Day trade effluent and 8.5 M³/Day domestic effluent). As per flow record provided by the unit, average water consumption during 10 July 2019 to 20 September 2019 is 532 M³/Day and average treated water discharge is 500 M³/Day.

The unit has provided ETP (1000 M³/Day capacity as per design details provided) which comprises following units:

Oil & Grease Chamber → Equalization Tank → Dissolved Air Flootation (DAF) → UASB Feed Tank → UASB → Aeration Tanks → Clarifier → Sand Filter → Carbon Filter → Treated Water Storage Tank → Re-used for internal cleaning purpose and excess is discharged for Irrigation

The gas generated from UASB is collected in Gas Holder and used for in-house purpose. During visit the gas was being utilized in canteen for cooking purpose. Sludge generated from the ETP is managed through 03 sludge drying beds (SDBs).

During visit, the ETP operation condition was not satisfactory. Some of the ETP units like O&G chamber, equalization tank, DAF were either non-functional or by-passed. Effluent was overflowing from SDBs and spreading on the ground. The unit representative explained that such condition arise due to heavy rain in the night.



Effluent overflowing from sludge drying beds and spreading on land

The team has collected grab sample from treated water storage tank and analysis results are given in the table below.

	Date	pH	TSS	TDS	COD	BOD	SO ₄ ⁻²	Cl ⁻	
ETP Outlet	03/09/2019	7.2	8.0	672	28	10	53.6	33	
ETP Outlet	24/09/2019	7.2	68	520	84	30	42	28	
CCA prescribed standards		6-8.5	100	2100	250	30	1000	600	

Note: All values are expressed in mg/l except pH.

As per CC&A condition, the treated effluent shall be recycled, reused to the maximum extent and excess if any shall be disposed on land for irrigation. It is informed that maximum treated water is reused in-house for cooling tower make-up, wash rooms, floor washing etc. and rest excess water is discharged for irrigation purpose. The unit has submitted copy of bi-lateral agreement for 20.65 acres land with farmers of Kolki and Vidani having agricultural fields near the unit for discharging treated effluent for irrigation purpose. It is informed that besides 20.65 acres, the unit is having its own agricultural land in 6 acres and thus total 26.65 acres of land is available for irrigation from treated effluent of the unit.

7.2 Conclusion:

- The unit is operating without valid CCA.
- The unit is not operating the ETP properly.
- Khadakhira drain is flowing adjacent to the boundary of unit premises which finally converge in River Neera. There was no visible discharges from the unit in the Khadakhira drain or outside the premises. During visit, the treated effluent was being stored in the treated storage tank and there was no discharge from the ETP.

8. M/S MAHARASHTRA FOODS PROCESSING & COLD STORAGE, TAL. PHALTAN, DISTT. SATARA

The unit is located at Gat. No. 21/2B, 22/4, Ganesh Nagar Baramati Road, Village - Algudewadi, Tal. Phaltan, Distt. Satara. The CC&A issued by MPCB on 22.03.2017 is valid till 31.10.2019. The unit was found operational during the visit. Mr. Anil Lokhande, I/c ETP of the unit was present during the visit and provided necessary information.

The unit is engaged in slaughtering of Buffalos for meat and other related products. As per record, average 193 buffalos are slaughtered every day.

8.1 Water and wastewater management:

Fresh water source for the unit is ground water. The unit is having two open wells within their premises for abstraction of ground water. The unit is not having permission from Central Ground Water Board (CGWB) for abstraction of ground water. As per the record provided, the unit had applied for permission in July 2018 but CGWB has not granted the permission as yet.

As per CC&A, total water consumption of the unit is 398.7 M³/Day (381 M³/Day for industrial purpose and 17.7 M³/Day for domestic purpose) and total effluent generation is 318 M³/Day (306 M³/Day trade effluent and 6 M³/Day domestic effluent). The unit has not provided any flow measurement device for water consumption and ETP and therefore no record is available for fresh water consumption as well as wastewater generation.

Wastewater is generated mainly from cleaning and washing of slaughter area and other related process area. The unit has provided ETP of 500 M³/Day capacity (as per design details provided) which comprises following units:

Screen Chamber → Collection Sump → Equalization Tank → Dissolved Air Floatation (DAF) → Aeration Tank → Clarifier-1 → Aeration Tank -2 → Clarifier-2 → Sand Filter → Carbon Filter → Treated Water Storage Tank with hypo dosing for disinfection → discharged for internal gardening and irrigation on land

One anaerobic digester is also provided in the ETP after equalization tank but the digester was not in operation during the visit. The sludge generated from the ETP is treated in a Decanter (25 KL/hr. capacity) and dried sludge is given to the farmers as manure. The unit is not maintaining the record of manure generation.

The team has collected grab sample of treated wastewater from ETP. The analysis results are given in the table below.

Sampling location	Date	pH	TSS	TDS	COD	BOD	SO ₄ ⁻²	Cl ⁻
ETP Outlet	24/09/2019	7.6	30	1012	36	14	129	78
CCA prescribed standards		5.5 to	100	2100	250	30	1000	600

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The analysis results shows that the treated effluent is within the CCA prescribed standards.

MPCB also monitored the treated effluent during their routine visit to the unit. The analysis results are given below.

Sampling location	Date	pH	TSS	TDS	COD	BOD	SO ₄ ⁻²	Cl ⁻
ETP Outlet	11/03/2019	8.6	34.0	1588.0	68.0	22.0	324	289.9
ETP Outlet	03/09/2019	7.6	16	792	24.0	8.0	173.5	58.0
CCA prescribed standards		5.5 to 9	100	2100	250	30	1000	600

The analysis results shows that the treated effluent is within the CCA prescribed standards.

As per CCA, the treated effluent shall be recycled / reused to the maximum extent and remaining shall be used on land for gardening / irrigation within factory premises only.

Though the unit is not permitted to discharge the treated effluent outside the premises, however it is observed that the unit is discharging the treated effluent outside the premises in agricultural fields. In this regard, the unit has provided copy of bi-lateral land agreement with 09 farmers from Algulewadi and Somwar Peth, Tal. Phaltan for discharging the treated effluent. The team visited nearby agricultural field where the treated wastewater from ETP is being discharged for irrigation. Cane crop is growing in the land being irrigated by the treated effluent.

The team has collected grab sample of wastewater from the discharge pipeline in the agriculture field in view of assessing its characteristics. The analysis results are given in the table below.

Location	pH	TSS	TDS	COD	BOD	SO ₄ ⁻²	Cl ⁻
Treated effluent at agricultural land	7.6	24	792	56	20	146	58

The analysis results shows that the characteristics of effluent at the agricultural field are comparable with the ETP outlet characteristics and hence it can be concluded that only treated effluent is being discharged in the agricultural fields.



Treated effluent discharge in agricultural field through pipe line

8.2 CONCLUSION

- The unit is abstracting the ground water without obtaining permission from CGWB.
- The unit is discharging the treated effluent for irrigation outside the premises and thus violating the CCA condition. MPCB should take suitable action against the unit.
- The unit has not provided flow measurement devices to quantify the actual water consumption, wastewater generation and reuse of treated wastewater for inhouse purpose as well as discharge for irrigation.
- Khadakhira drain is flowing adjacent to the boundary of unit premises which finally converge in River Neera. During visit the treated effluent was being utilized for irrigation and there was no visible discharges from the unit premises in Khadakhira drain. MPCB needs to monitor the Khadakhira drain in the downstream of the unit occasionally.

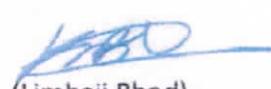
9. WATER QUALITY STATUS RIVER NEERA

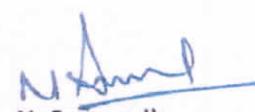
Grab samples of River Neera were collected from 03 locations i) Sangavi Bridge, Phaltan, downstream of Khadakhira Nala ii) Shirwali, Bhandara, upstream of Kalaodha Nala iii) Wagaj Village, Bhandara downstream of Kala Odha Nala to assess the water quality (google image showing sampling locations is attached as **Annexure-1**). The analysis results are given in the table below.

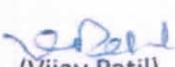
Date of sampling	Location	BOD	COD	DO	O & G	pH	SS	Cl	SO ₄ ⁻²	TDS
23.09.19	Sangavi Bridge	2.8	8	6.4	-	8.3	24	90	152	576
24.09.19	Shirwali, Bhandara	4.2	12	6.4	BDL	8.4	26	90	176	516
24.09.19	Wagaj Village	4.0	12	6.5	BDL	8.3	48	90	100	462

The analysis results for analyzed parameters shows that the water quality of River Neera on all three monitored locations is not contaminated with industrial effluent. Here it is worth mentioning that during visit substantial flow observed in River Neera and the colour of water was slightly muddy which was mainly due to heavy rain in the area on the preceding day (some photographs taken during the visit are given below). Sugar cane and other local crops were growing along the bank of the river and it was observed that farmers were extracting the river water through pumping for irrigation. MPCB needs to monitor these three locations during operational phase of sugar and distillery units to assess the status of water quality during that period.


(Pratap Jagtap)
Sub-Regional Officer, MPCB,
Pune-1


(Limbaji Bhad)
Sub-Regional Officer, MPCB,
Satara

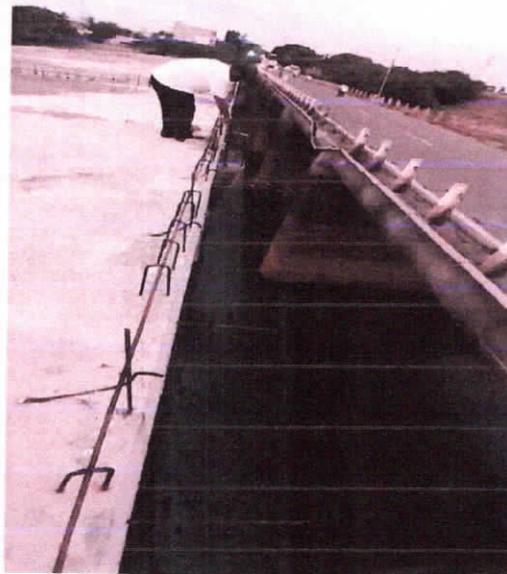

(Dr. N. Semwal)
Scientist-B
CPCB RD (W), Vadodara


(Vijay Patil),
Tahsildar, Baramati


(Shivaji Jagtap)
SDO, Phaltan



River Neera at Sangavi Bridge



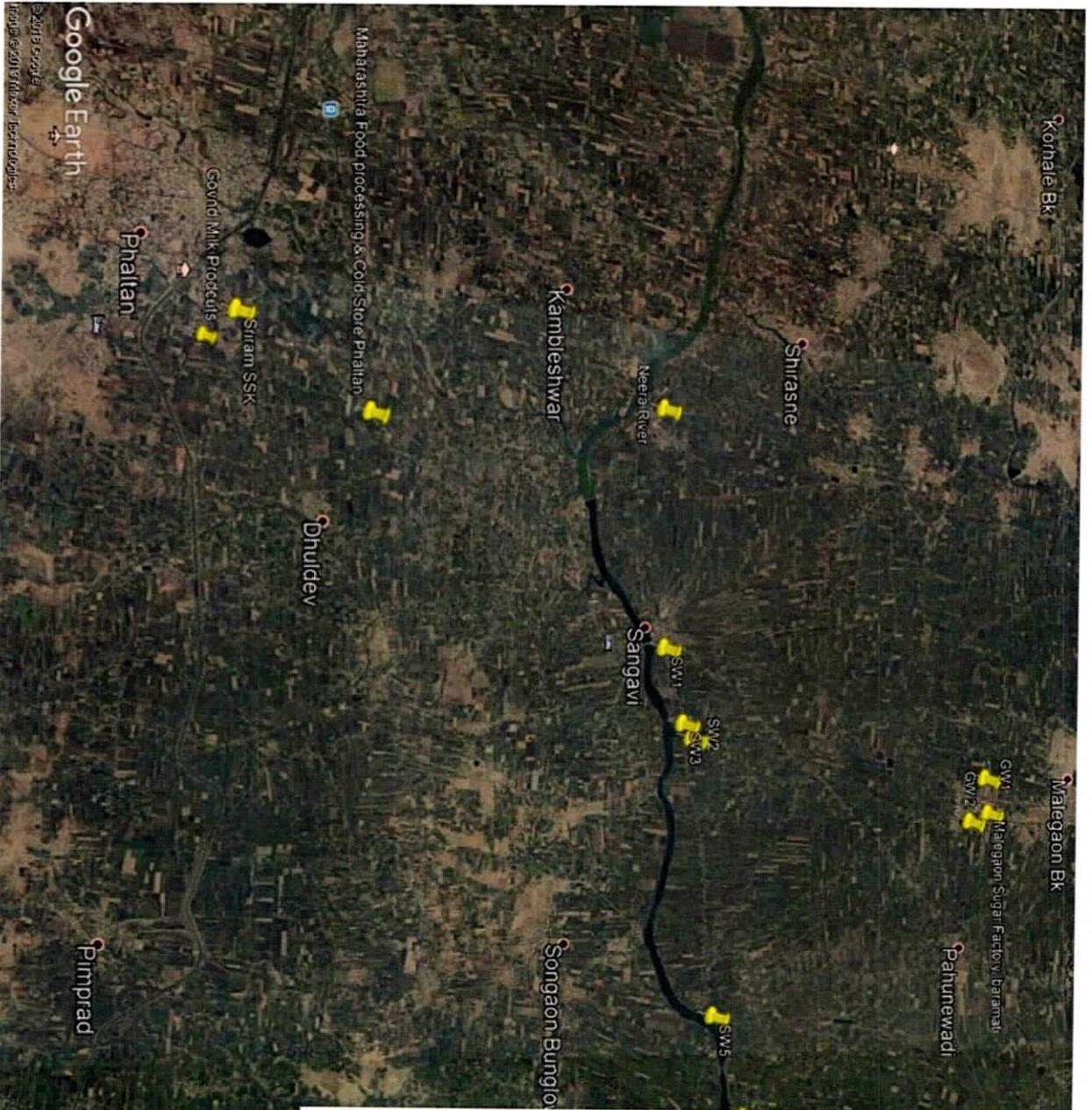
Sampling of River Neera at Sangavi Brside



River Neera at Shirwali - Bhandara



Kalaodha drain (muddy colour) near Vithhalwadi down stream of Malegaon Sugar & Distillery



Industry Location

S.No.	Name of Industries	Latitude	Longitude
1.	M/s Malegaon Sugar Factory, Baramati	18° 6'43.04"N	74°30'38.80"E
2.	M/s Govind Milk Products, Phaltan	17°59'28.74"N	74°26'53.74"E
3.	M/s Sree Ram SSK, Phaltan	17°59'41.96"N	74°26'38.70"E
4.	M/s Maharashtra Food Processing & Cold Store, Phaltan	18° 0'47.21"N	74°27'21.69"E

Sampling Details

S.No.	Sample Code	Location Description	Latitude	Longitude
1.	SW1	River Neera at Sangavi Bridge	18° 3'24.40"N	74°29'13.18"E
2.	SW2	Kaloobha Nala near Vithalwadi, Sirrol - Khandz Road, before confluence to River Neera	18° 3'40.74"N	74°30'2.28"E
3.	SW3	River Neera at Sirrol, Bhandara, upstream of Kaloobha Nala	18° 3'35.66"N	74°29'54.72"E
4.	SW4	River Neera near Wagaji Village, downstream of Kaloobha Nala	18° 4'13.62"N	74°33'34.49"E
5.	SW5	Kharakhira Nala, downstream of Malegaon sugar & distillery units and before discharge to River Neera	18° 3'55.09"N	74°32'36.97"E
6.	GW1	Bore Well Of Shivaji Takke Rut 203	18° 6'42.00"N	74°30'18.00"E
7.	GW2	Bore well - Shanti kumar Shah Gut 135	18° 6'32.00"N	74°30'44.00"E



MAHARASHTRA POLLUTION CONTROL BOARD
REGIONAL OFFICE - PUNE

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Jog Centre, 3rd Floor,
Wakdewadi,
Old-Pune Mumbai Road,
Pune- 411003

MPCB/ROPI/MMB/PD/19/1200004

Date: 20/11/2019

To,
M/s. The Malegaon Sahakari Sakhar Karkhana Ltd.,
232, 234, Shilvnagar,
Tal. Baramati, Dist. Pune.

Sub: Proposed Directions under section 33 A of Water (Prevention & Control of Pollution) Act, 1974, 31 A of Air (Prevention & Control of Pollution) Act, 1981 & Hazardous and Other Waste (M & TM) Rules, 2016.

Ref : 1. Consent granted by the Board.
2. Analysis result communicated to you by SRO vide letter no. 191114-FTS-0052
3. Proposal received from SRO through legal module on 20/11/2019

WHEREAS, you are operating your industry located in 'Pollution Prevention Area' under Water (Prevention & Control of Pollution) Act, 1974 & Air (Prevention & Control of) Act, 1981 & Hazardous & Other Waste (Management & TM) Rules, 2016.

AND WHEREAS, the Board had granted the consent to operate under Section 26 of the Water (Prevention & Control of Pollution) Act, 1974, under Section 21 of the Air (Prevention & Control of Pollution) Act, 1981 and Authorization under Rule 6 of the Hazardous Wastes (MH & TM) Rules, 2016 and amendments thereof.

AND WHEREAS, it is obligatory on your part to provide pollution control systems as it warranted and to operate and maintain the same continuously and effectively so as to achieve the standards prescribed in the consent.

AND WHEREAS, Board official has visited to your industry on 14/12/2018 and 18/02/2019 and collected joint vigilance sample of ETP outlet of your industry and also accordingly submitted the action proposal vide ref (3).

AND WHEREAS, it was observed from the analysis report of JVS collected as above the ETP outlet parameters particularly BOD-160 mg/lit, COD-472 mg/lit, of dtd 14/12/2018 and BOD - 155 mg/lit and COD- 460 mg/lit of dtd 18/2/2019 are found exceeding than prescribe consented standards.

AND WHEREAS, it is concluded that from the above results the operation and maintenance of ETP is very poor to achieve the consented prescribed effluent standards.

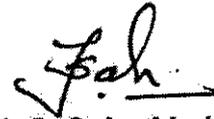
AND WHEREAS, from the record of this office and observations made during the visit, I came to the conclusion that you are not complying with the consent condition and the provision of Water (Prevention & Control of Pollution) Act, 1974 thereby causing grave injury to the environment.

NOW THEREFORE, in exercise of the powers conferred upon me under section 33 A of Water (Prevention & Control of Pollution) Act, 1974, 31 A of Air (Prevention & Control of Pollution) Act, 1981, I, J. S. Salunkhe, Regional Officer of the Board, at Pune hereby issue directions as under-

1. Why your unit shall not be directed to close down the manufacturing activity forthwith?
2. Why the competent authorities shall not be directed to disconnect Water / electricity supply of your unit?

You are directed to submit your reply / corrective action plan towards the compliance of above related points/non-compliances along with all necessary documents along with photograph within 03 days from receipt of this letter, failing which further necessary action as deemed fit in your case as per the provisions of various environmental enactments will be initiated against you, which may please be noted.

For and on behalf of
Maharashtra Pollution Control Board



(J. S. Salunkhe)
Regional Officer

Copy Submitted for information to

1. Joint Director(WPC), M.P.C. Board, Mumbai.

Copy to-

The Sub-Regional Officer, M.P.C.Board, Pune I :- You are directed to keep the follow up and report the compliance from time to time.