IN THE HON'BLE NATIONAL GREEN TRIBUNAL,

PRINCIPAL BENCH, NEW DELHI

ORIGINAL APPLICATION NO. 539 OF 2019

IN THE MATTER OF:

ADIL ANSARI **…Applicant**

VERSUS

DHAMPUR SUGAR MILLS LTD. ASMOLI & ORS.

…Respondents

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Date: .11.2025

IN THE HON'BLE NATIONAL GREEN TRIBUNAL

PRINCIPAL BENCH, NEW DELHI

ORIGINAL APPLICATION NO. 539 OF 2019

IN THE MATTER OF:

ADIL ANSARI **...Applicant**

VERSUS

DHAMPUR SUGAR MILLS LTD. ASMOLI & ORS.

...Respondents

AFFIDAVIT OF COMPLIANCE ON BEHALF OF RESPONDENT NOs. 1 and 3 I.E., M/S DHAMPUR SUGAR MILLS LTD., ASMOLI (SUGAR UNIT) AND M/S DHAMPUR SUGAR MILLS LTD., MEERGANJ

MOST RESPECTFULLY SHOWETH:-

I, Amit Sharma, S/o Late Shri Jagdish Chandra Sharma, aged about 58 years, working as V.P Business Compliance of Bhampur Bio Organics Ltd., having its office at Second Floor, Plot No. 201, Okhla Industrial Estate, Phase-III, New Delhi – 110020, presently at Noida, do hereby solemnly affirm and state as under:

1. That I am the authorized signatory for the answering Respondent Nos. 1 (M/s Dhampur Bio Organics Ltd, Village Asmoli, Sambhal Tehsil and District, Uttar Pradesh.) and 3 (M/s Dhampur Bio Organics Ltd,

Village Sindhauli, Meerganj Tehsil, Bareilly District) and am well conversant with the facts and circumstances of the matter as per the records of the answering Respondent Nos. 1 and 3 that are made available to me. As such, I am competent to swear and affirm this affidavit.

2. This Hon'ble Tribunal *vide* its order dated 02.04.2025 had directed Respondent No 8 and 9 i.e. UPPCB and CGWA to file affidavits disclosing the status of compliance of the directions of this Hon'ble Tribunal contained in its Judgment dated 01.09.2021. The Respondents No. 1 & 3 had entered appearance on 03.02.2025 after the said case was remanded by the Hon'ble Supreme Court vide Order dated 07.01.2025 and for abundant precaution, the answering Respondents herein are filing the instant Affidavit to place on record the updated status of compliance of the directions passed by this Hon'ble Tribunal in its Judgment dated 01.09.2021 and in view of the Order dated 07.01.2025 passed by the Hon'ble Supreme Court.

3. Before submitting the said Status of Compliance, the Respondents No. 1 and 3 crave leave to place on record certain facts which, in the humble opinion of the Respondents No. 1 and 3 are crucial for the holistic adjudication of the issue.

BRIEF FACTS:

4. That M/s Dhampur Bio Organics Ltd.(Sugar Unit), Village Asmoli, Sambhal Tehsil and District, Uttar Pradesh- **Respondent No. 1** was earlier known as M/s Dhampur Sugars Ltd. (Sugar Unit, Asmoli) and M/s Dhampur Bio Organics Ltd (Sugar Unit), Village Sindhauli, Meerganj Tehsil, Bareilly District- **Respondent No. 3** was earlier known as M/s Dhampur Sugars Ltd. (Sugar Unit, Meerganj) (**Answering Respondents**).

5. That the Hon'ble National Company Law Tribunal, Allahabad (hereinafter referred to as the "**NCLT**") *vide* Order dated 27.04.2022 (with effect from 03.05.2022) has approved the Scheme of Arrangement between Dhampur Sugar Mills Ltd. and Dhampur Bio Organics Ltd., their respective shareholders and creditors in CP (CAA) No. 031 ALD 12022, connected with CA (CAA) No. 251 ALD/2021. Consequent to the said order, the business undertakings of *inter alia* Respondent No. 1 and Respondent No. 3 stood transferred to a new parent company, being Dhampur Bio Organics Limited, on a going concern basis. As such, the Respondent No. 1 and 3 have been renamed as "Dhampur Bio Organics Ltd., Unit- Asmoli" and "Dhampur Bio Organics Ltd., Unit – Meerganj", respectively.

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6. The instant Original Application ("**OA**") was filed by the one Mr. Adil Ansari, Applicant, making baseless and misleading allegations against the units of the answering seeking directions of this Hon'ble Tribunal interalia against the above said units of the Respondents, which are located in two different districts which are at a distance of more than 100 km apart. It is important to emphasise that the Applicant is a resident of Village Garhi Mendu, Seelampur, New Delhi, where he has failed to establish his locus as to how he is aggrieved from the said plants where he does not reside or remotely connected with the location of the said units as described above.

7. That in ***State of Uttar Pradesh v. Uday Education and Welfare Trust, 2022 SCC OnLine SC 1469***, the Hon'ble Supreme Court has categorically held that the credentials and bonafide's of the litigator ought to be considered and tested, especially when the rights of many are going to be adversely affected. That further in ***Anand Kumar Jha v. Union of India and Ors, I.A.No.78/2021/EZ in Appeal No.05/2021/EZ***, this Hon'ble Tribunal stated that there is a need for thorough examination of litigants' credentials before allowing cases with significant ramifications. It further stated that the National Green

Tribunal must verify the genuineness and intentions of such litigants, particularly when their grievances could affect numerous rights and interests. Further, in ***Rana Sengupta v. Union of India, 2013 SCC OnLine NGT 31***, it was held that the, Appellant did not have locus as the Appellant could not show any expertise to evaluate impact on environment and there was no record of appellant's participation the public consultation process and raised any issue regarding the environment or socioeconomic adverse impact on account of establishment of the proposed project. The Answering Respondent craves liberty to place the same on record, if so directed by this Hon'ble Tribunal.

8. It is clear from the above that this case may be dismissed on this ground alone.

9. That before responding to the remission by the Hon'ble Supreme Court it is important to summarise the proceedings prior to the same. That after the instant Original Application and its proceedings, this Hon'ble Tribunal vide its Judgement dated 01.09.2021 passed the following directions with respect to Respondent No. 1 and 3: -

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"157. We are further of the opinion that following directions are necessary for ensuring compliance of environmental norms by the units:-

i.) All the Units must ensure continuous running of ETPs even during the non-crushing season for the adequate maintenance of required bio-mass so that the ETP is able to take the load/shock when it receives the pollution load/effluent at the start of the crushing season.

ii.) All the Units in question must provide for separate Energy Meter for entire ETP setup including its accessory units with data logging facility which shall be inspected by UPPCB and CPCB from time to time.

iii.) UPPCB must ensure Interlocking of Pollution Control Devices with production processes (one way but not vice-versa) so as to ensure that whenever ETPs/PCDs are intentionally closed, the production also comes to halt.

iv.) Regular inspections should be carried out by the statutory authorities in both halves of the crushing season and also at least once in non-crushing season.

v.) Since the Asmoli Unit falls in the critical zone with respect to ground water withdrawal, an assessment of water recharge needs to be carried out by CGWA or UPGWB before issuance of NOC. The Statutory Authorities are directed to ensure the above directions strictly so that industries may run without causing damage or loss to the environment as well as to the local inhabitants and farmers residing nearby the Units."

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Dhampur Bio Organics Ltd.

Further, vide the above mentioned Judgment dated 01.09.2021, a Committee comprising representatives of the CPCB, UPPCB and District Magistrates of Sambhal, Bijnor and Bareilly districts was also constituted to assess the extent of the alleged damage caused to the environment by the answering Respondent units and submit its report to the CPCB within a period of three months.

A copy of this Hon'ble Tribunal's Judgment dated 01.09.2021 is annexed herewith and marked as **Annexure 1.**

10. That aggrieved by the aforesaid Judgment dated 01.09.2021, the Respondents Nos. 1-3 in the OA preferred a Civil Appeal bearing No. 5975 of 2021 before the Hon'ble Supreme Court on 20.09.2021.

11. That the Hon'ble Supreme Court *vide* its order dated 08.10.2021, while issuing Notice, stayed the impugned Judgment dated 01.09.2021 to the extent of the direction for payment of compensation of Rs. 5 crores by each unit and costs of Rs. 10 lakhs imposed on Respondent Nos. 1 to 3. Further, the Hon'ble Supreme Court directed the constitution of a Committee as directed by this Hon'ble Tribunal in its Judgment dated 01.09.2021, to make a detailed study, and also directed that no further steps shall be taken by the Committee, for a period of six weeks from the said date. A copy of the Hon'ble Supreme

Court's order dated 08.10.2021 in Civil Appeal No. 5975 of 2021 is annexed herewith and marked as **Annexure 2**.

12. In compliance with the directions of the Hon'ble Supreme Court as well as of this Hon'ble Tribunal, the Joint Committee of CPCB, Uttar Pradesh Pollution Control Board, Central Ground Water Authority and District Magistrates of Bijnor, Sambhal and Bareilly submitted a detailed study report dated 15.11.2022 (hereinafter referred to as the First Joint Committee Report). The said report was submitted by the CPCB- Respondent No. 7 herein. In the aforesaid report, the following recommendations for all the four Respondent Units i.e. Respondent No 1 and 3 as above and Respondent No 2 (Dhampur Sugar Mills Ltd., (Dhampur Sugar and Distillery Units) Village Alhaipur, Tehsil Dhampur, District Bijnor, Uttar Pradesh were made after carrying out a detailed study between 15th - 18th November, 2021 of Respondent Nos. 1 and 3 and 1st – 2nd December of Respondent No. 2:

"***8. Recommendations***

- *The contamination in Ground Water has been observed at shallow depth handpumps/borewells, hence it is recommended that UPGWD & Nalkoop Vibhag may be asked to look into the matter, and arrangement for deep borewell shall be made.*

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Dhampur Bio Organics Limited DBO

- *UPGWD to ensure marking and sealing of unsafe borewells/ handpumps.*
- *Also, for ensuring availability of safe drinking water to the residents of villages highlighted in the report UP Jal Nigam should make provisions for supplying tap water.*
- *Units shall ensure that installed ESP/ Bag filters are operated effectively.*
- *Feasibility of in-situ remediation for restoration & rejuvenation of River Sot shall be explored and action plan for the same to be prepared by the concerned department such as U.P. Irrigation Department in consultation with all the concerned agencies. If necessary an expert agency may be engaged.*
- *To prevent the impact of Ikra drain, Dhampur (Bijnor) on water quality of river Karula, feasibility of constructed wetland shall be explored before the confluence of Ikra drain into Karula river.*
- *UPPCB shall issue necessary directions to the units for ensuring that no discharge of partially treated/ untreated effluent takes place into Pilakhar River, Sot River & Ikra drain or any water body takes place.*"

A copy of the detailed study report dated 15.11.2022 filed before the Hon'ble Supreme Court by the Joint Committee of CPCB, UPPCB, CGWA and District Administrations of District Bijnor, Sambhal and Bareilly is annexed herewith and marked as **Annexure 3**.

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13. Thereafter, on 06.09.2024, the Hon'ble Supreme Court further directed that "*A Joint Report by the CPCB and the State Pollution Control Board shall be filed indicating the compliances as per the directions of the National Green Tribunal and also after taking into account the subsequent Committee reports. The report shall also indicate about the compliances of the conditions specified in the environmental clearances and further steps which need to be taken by the appellant(s)*". A copy of the Hon'ble Supreme Court's order dated 06.09.2024 in Civil Appeal No. 5975 of 2021 is annexed herewith and marked as **Annexure 4**.

14. Subsequently, the Joint Committee of CPCB and UPPCB carried out inspection of the four units of the Respondents No 1, 2 and 3 as mentioned above, during October 2024. During the said inspections, the team collected the samples from aeration tanks of effluent treatment plants, Sewage Treatment Plant, bore wells and recipient drain and checked logbooks for ETPs, STPs, bore wells, ash and sludge generation, energy consumption from all units as mentioned above. On 19.12.2024, the Joint Committee filed its detailed report. A copy of the report dated 19.12.2024 filed by the Joint Committee of

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CPCB and UPPCB before the Hon'ble Supreme Court is annexed herewith and marked as **Annexure 5**.

15. In the above mentioned Report, the following conclusions and recommendations were made by the Joint Committee viz. Respondent Nos. 1 and 3:

"***7. That Unit wise conclusions and recommendations are reproduced below:***

7.1 M/s Dhampur Bio Organics Ltd., Unit-Asmoli, District Sambhal (Sugar Unit) (Respondent No 1)

Conclusion:

1. Unit was non-operational during joint site inspection by CPCB and UPPCB on 10.10.2024 due to non-crushing season. During survey of the surroundings of the unit and Sot river, no coloured water was visible at the time of visit.

2. The ground water sample analysis result does not indicate impact due to the industry.

3. The unit has complied with the recommendations of Joint Inspection report dated 13th January 2021. Details of the same are mentioned in Part C of the report.

4. The details of the verification of the directions of Hon'ble NGT passed vide judgement dated 01.09.2021 are mentioned in Part D of the report. Unit has complied all the points except the directions regarding interlocking of Pollution Control Devices with production processes.

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Dhampur Bio Organics

5. The detailed compliance status of Environmental Clearance (EC) conditions is mentioned at Part E of the report. The unit has not compiled with the following conditions:

i. No rainwater harvesting system was observed in the plant.

ii. Not installed CAAQMS.

Inspections by third party institutes authorised by CPCB in the past:

A third party technical institutes authorised by CPCB carried out inspection of the unit in operational condition on 20-02-2022 an 01-03-2023 and unit was found complying standards during both inspections.

Recommendations:

1. The unit shall maintain the ash disposal record with respect to disposal and distribution.

2. Unit shall implement a system for interlocking of the pollution control plants / devices and the production process, as directed by Hon'ble NGT-PB.

3. UPPCB shall carry out random inspection of the unit in operational condition.

4. Unit shall comply with following EC conditions:

i. Install CAAQMS stations as per EC condition.

ii. Make provision for rain water harvesting as per EC condition.

7.2 M/s Dhampur Bio Organics Ltd., Unit-Meergani, District Bareilly (Sugar Unit)

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Conclusion:

1. Unit was non-operational during joint site inspection by CPCB and UPPCB on 18.10.2024 due to non-crushing season. During survey of the surroundings of the unit and Sot river, no coloured water was visible at the time of visit.

2. The ground water sample analysis result does not indicate impact due to the industry.

3. The unit has complied with the recommendations of Joint Inspection report dated 13th January 202 1. Details of the same are mentioned in Part C of the report.

4. The details of the verification of the directions of Hon'ble NGT passed vide judgement dated 01.09.2021 are mentioned in Part D of the report. Unit has complied all the points except the directions regarding interlocking of Pollution Control Devices with production processes.

5. The detailed compliance status of Environmental Clearance (EC) conditions is mentioned at Part E. The unit has not compiled with the following conditions:

i. No rainwater harvesting system was observed in the plant.

ii. Not installed CAAQMS.

Inspections by third party institutes authorised by CPCB in the past:

A third party technical institutes authorised by CPCB carried out annual inspection of the unit in operational condition on 17-01- 2022 and 15-02-2023 and unit was found complying standards during both inspections.

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Recommendations:

1. The unit shall maintain the ash disposal record with respect to disposal and distribution.

2. Unit shall implement a system for interlocking of the pollution control plants/ devices and the production process, as directed by Hon'ble NGTPB.

3. UPPCB shall carry out random inspection of the unit in operational condition.

4. Unit shall comply with following EC conditions:

i. Install CAAQMS stations as per EC condition.

ii. Make provision for rain water harvesting as per EC condition.

16. The Hon'ble Supreme Court took cognizance of the Final Report and *vide* its order dated 07.01.2025 observed that the report speaks about the compliance rather non-compliances by the four units. Accordingly, the Hon'ble Supreme Court directed this Hon'ble Tribunal to monitor the compliances and ensure that the Judgement dated 01.09.2021 of this Hon'ble Tribunal is fully implemented. Further, disposing of the Civil Appeal, the Hon'ble Supreme Court held that this Hon'ble Tribunal may revisit the directions with respect to payment of compensation and pass such order as may be necessary. Accordingly, the Hon'ble Supreme Court remanded back the matter.

to this Hon'ble Tribunal. A copy of the Hon'ble Supreme Court's order dated 07.01.2025 in Civil Appeal No. 5975 of 2021 is annexed herewith and marked as **Annexure 6**.

17. Upon the matter being remanded back to this Hon'ble Tribunal, and in view of the Hon'ble Supreme Court's Order dated 07.01.2025 and the Hon'ble National Green Tribunals orders dated 03.02.2025, 02.04.2025 and 04.08.2025 the Answering Respondents are seeking liberty to file an Affidavit disclosing the status of compliance of the directions of this Hon'ble Tribunal.

18. The directions passed by this Hon'ble Tribunal vide its Judgment dated 01.09.2021 and the observations made by the Hon'ble Supreme Court in its order dated 07.01.2025 in the Civil Appeal and the status of compliance are captured in the table hereinbelow:

A) Status of compliance of Directions passed by this Hon'ble Tribunal vide its Judgment dated 01.09.2021

Respondent No. 1 **(Dhampur Sugar Mills Ltd., Unit-Asmoli, District Sambhal)**	
All the Units must ensure continuous running of ETPs even	**Complied.** CPCB in its Report dated 19.12.2024 filed before the Hon'ble Supreme Court reported that

during the non-crushing season for the adequate maintenance of required bio-mass so that the ETP is able to take the load/shock when it receives the pollution load/effluent at the start of the crushing season.	the compliance status as on 10.10.2024 was as follows: *"At the time of visit, the unit was non-operational due to off-season. Team observed that the ETP was under stabilization. For the maintenance of adequate bio-mass aeration tank was found operational.* *Sample was collected from the aeration tank and the analysis results are as follows:* *MLSS = 1916 mg/l* *MLVSS =1323 mg/l* *Analysis results showed MLVSS/MLSS ratio as 0.69 which indicates that unit is in process of developing active biomass for stabilizing ETP prior to commencement of crushing season." (ref. pg. 30 of the Final Report).* MLVSS is Mixed Liquor Volatile Suspended Solid and MLSS is Mixed Liquor Suspended Solids. Further, as per the Reply dated 02.08.2025 filed by the UPPCB in the instant OA, it has been observed that the unit was found closed due to off-season. It categorically notes that the effluent generated from washing was being treated in ETP. The Report further notes that ETPs have

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	started one month before the beginning of crushing season so that it has sufficient bio - mass. It is operated one month after the closure of crushing season after the cleaning is completed and the Board has been duly intimated.
All the Units in question must provide for separate Energy Meter for entire ETP setup including its accessory units with data logging facility which shall be inspected by UPPCB and CPCB from time to time.	**Complied.** CPCB in its Final Report dated 19.12.2024 filed before the Hon'ble Supreme Court reported that the compliance status as on 10.10.2024 was as follows: *"Separate energy meter was found installed for the ETP. The unit has maintained log book of energy consumption. The team collected log book of energy meter for the period from Nov 2023 to March 2024..."* (*ref. pg. 31 of the Final Report*) The same finding has been recorded by the UPPCB in its Reply dated 02.08.2025. The Report further notes that the unit has installed online continuous effluent monitoring system which is connected to the server of CPCB.
UPPCB must ensure Interlocking of Pollution Control Devices with production processes	This condition is neither feasible nor practicable for the unit. The reasons of which are as follows: I. In the case of ***Tandur Citizens Welfare Society Rangareddy District v. State of Telangana***, as per the directions of this

(one way but not vice-versa) so as to ensure that whenever ETPs/PCDs are intentionally closed, the production also comes to halt.	Hon'ble Tribunal, the CPCB, vide Order dated 02.02.2022 constituted a Committee comprising of the representative of NEERI Nagpur, National Chemical Laboratory, Pune, WBPCB, Maharashtra PCB and the CPCB to examine the feasibility of introduction of interlocking systems in various industrial sectors where OCEMS are installed. II. **1st meeting of the Committee** was conducted on 05.02.2022 which observed that implementation of interlocking system to stop production process in case of failure of pollution control system need to be implemented based on following considerations: a. Use of interlocking should be between the production process and the emission/effluent control equipment through a PLC and SCADA systems. It is not desirable to use such interlocking with OCEMS. b. Instant shutting down of some industrial processes may pose risk of safety and health hazard to workers, due release of fugitive emissions/gases or discharges. Therefore, interlocking

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	system may not be feasible in sectors such as pharmaceutical, petrochemical, etc. c. Industrial processes are diversified across the sectors and specific arrangements/protocols may be required for each sector. d. Interlocking systems may be implemented in only those industries, where such interlocking systems does not pose risk of safety and health hazard to workers. e. Further, within industry, there is a need to identify feasible process areas where interlocking systems can be implemented effectively and safely f. Interlocking systems may be implemented in phased manner in noncritical processes as part of the production process. III. Accordingly, CPCB filed its final report dated 06.05.2022, wherein CPCB has concluded that *"...it is not recommendable to force industries to install interlocking system between OCEMS and production processes, across all the sectors".*

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IV. The relevant para of Tandur judgement dealing with CPCB's report is reproduced hereinbelow for ease of reference:

"7. Further report has been filed by CPCB on 06.05.2022 with regard to feasibility of interlocking of industrial process with OCEMS and assessment of feasibility of interlocking of industrial processes with OCEMS. Relevant extracts from the report is as follows:—

.....

During the meetings held on 05.02.2022 and 02.05.2022, the Committee examined the matter and recommended the following:

i. The purpose of OCEMS is to regulate and minimize inspection of industries on routine basis by bringing self-discipline in the industries to exercise self-monitoring and compliance. Further, through continuous access of effluent and emission data, SPCBs/PCCs and CPCB also ensure constant vigil on environmental compliance by industries.

ii. OCEMS are linked to both CPCB and SPCB servers and SMS messages/alerts get generated in case of value of pollutant parameter exceeds prescribed environmental norms, non-acceptable

	variations in data and offline behaviour of OCEMS. The existing set up is adequate for self- monitoring and to initiate corrective action, including regulating the production process. iii. *It is not recommendable to use OCEMS based interlocking for instant shutting down of industrial processes, as the same may pose risk to safety, health hazard and uncontrolled emissions, due to incomplete chemical reactions/processing, especially in the industrial sectors such as chemical industries, copper smelters, thermal power plants etc.* *6. Conclusion:* ***Considering the present status of OCEMS and also keeping in view the risk to safety, health hazard and uncontrolled emissions in case of sudden shut-down of processes, it is not recommendable to force industries to install interlocking system between OCEMS and production processes, across all the sectors.*** *"* Thus, from a bare perusal of the conclusion of the CPCB report dated 06.05.2022, it can be submitted that industries other than cement

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Dharamsi Morarji Chemical Co. Ltd. Unit: Bio Organics Division

industries need not be forced to install interlocking systems.

A copy of the aforesaid judgement along with CPCB's report dated 06.05.2022 and 08.02.2022 is annexed herewith as marked as **Annexure 7 (Colly.)**.

V. No requirement of Interlocking Systems provided in Charter 2.0 of CPCB

- It is submitted that even the CPCB's Comprehensive Charter for Water Conservation and Pollution Prevention by Sugar Industries (Charter 2.0) issued in July 2024, and then in May 2025, does not contemplate any such requirement of interlocking of the pollution control plants/devices and the production process.

A copy of the CPCB's Comprehensive Charter for Water Conservation and Pollution Prevention by Sugar Industries (Charter 2.0) is annexed herewith and marked as **Annexure 8**.

VI. Expert Opinion sought from Shri. Narendra Mohan, Former Director of National Sugar Institute, Kanpur ("NSI Kanpur")

	➢ An opinion was sought from Shri Narendra Mohan on the technical feasibility of Inter-locking of effluent treatment and air emission control system in a Sugar Unit & Distillery, as directed in NGT's Order. ➢ *Vide* a letter dated 01.02.2025, Shri. Mohan's opinion are as follows: i) The raw materials used for production of sugar i.e., sugarcane and other process intermediaries such as sugarcane juice, syrups, etc. deteriorate upon retention. Thus, continuity in operation is a must for sugar units and sugar units cannot be equated with other industries viz. cement, textile, electrical and electronics and so on. ii) If because of any temporary issue with pollution control devices, the production process is stopped, it will result in decomposition of process house liquors as reflected from deterioration of bag-able sugar to the extent of almost no commercial use. For e.g., Sucrose starts getting inverted the moment manufacturing process is stopped and thus, in such a situation, stagnated material would require removal through deep cleaning of the entire plant before it is to be operated again.

	iii) Any stoppage in manufacturing process will cause huge loss to the sugar unit due to loss of sugar and miscellaneous other losses due to suspension of crushing operations and expenses on cleaning. iv) Therefore, considering "*the perishable nature of raw materials and many other relevant factors e.g. power generation to meet captive requirements and also to export, necessitating it to be a continuous operation, interlocking of sugar production process in sugar units with pollution control devices does not seem to be feasible*." v) In any case, as data related to emissions is regularly transmitted to CPCB/SPCB through OCEMS, any deliberate or accidental stopping of pollution control devices shall be explicitly clear to the CPCB/SPCB enabling them taking any appropriate action as they may deem fit. vi) Pertinently, "*even as per the latest issued "Sugar Charter 2.0" there is no provision of interlocking of Effluent Treatment Plant and/or Air Emission Control System and the Charter 2.0 is silent on this issue*

	meaning thereby no such regulation is required to be imposed." A copy of the opinion sought from expert authority, Shri Narendra Mohan, Former Director of National Sugar Institute, Kanpur on the technical feasibility of Inter-locking of effluent treatment and air emission control system in a Sugar Unit & Distillery is annexed herewith and marked as **Annexure 9**. ➢ From the aforesaid, it can be safely concluded that OCEMS are enough to monitor the pollution control devices and it is not feasible for the units to implement a system for interlocking of the pollution control plants / devices and the production process, as directed by the NGT. The rigour of OCEMS, the periodic monitoring by SPCB as well as third party audits carried out by the PP is rigorous enough to comply with the law.
Regular inspections should be carried out by the statutory authorities in both halves of the crushing season and also at least	**Complied.** CPCB in its Final Report dated 19.12.2024 filed before the Hon'ble Supreme Court reported that the compliance status as on 10.10.2024 was as follows:

once in non-crushing season.	*"During crushing season 2022-23 and 2023-24, sampling was carried out three times i.e. on 14-02-2023, 21-03-2023 & 09.12.2023 by UPPCB. Unit was found complying standards during all these inspections. ...* *Also, third party technical institutes authorised by CPCB carried out inspection on 20-02-2022 & 01-03-2023 and unit was found complying standards during both inspections. ..."* *(ref. pg. 31 of the CPCB's Final Report)* Further, the UPPCB Reply dated 02.08.2025 also reiterates the compliance, as evidenced during the latest inspection carried out on 21.06.2025. The Report categorically states that UPPCB as well as third party institutions are conducting periodic inspection of the unit, and it has been found compliant.
Since the Asmoli Unit falls in the critical zone with respect to ground water withdrawal, an assessment of water recharge needs to be carried out by CGWA or UPGWB before issuance of NOC.	**Complied.** CPCB in its Final Report dated 19.12.2024 filed before the Hon'ble Supreme Court reported that the compliance status as on 10.10.2024 was as follows: *"As per notification dated 06-02-2024 regarding amendment in Section 9 of Uttar Pradesh Ground Water (Management and Regulation) Act, 2019 (Uttar Pradesh Act No. 13 of 2019)*

	districts are divided into blocks and as per categorisation of blocks based on water depletion updated during 2023, Asmoli block now falls under semi critical zone. ... *Unit has obtained valid ground water permission for groundwater abstraction from 03 no. of Borewell dated 06.07.2021having validity upto 26.06.2026 with NOC no. NOC012653, NOC039759 and NOC034938.* *As per the conditions of NOC of UPGWD, the unit can abstract groundwater at a maximum rate of 138000 KL/annum (60000 from bore well -1, 60000 from borewell -2 and 18000 from borewell -3 annually)."* (*ref. pg. 31 of the Final Report*) Further, as per the UPPCB Reply dated 02.08.2025, the unit has obtained NOC for ground water abstraction with validity till 28.06.2026.
Respondent No. 3 **(Dhampur Sugar Mills Ltd., Unit-Meerganj, District Bareilly)**	
All the Units must ensure continuous running of ETPs even	**Complied.** CPCB in its Final Report dated 19.12.2024 filed before the Hon'ble Supreme Court reported that

during the non-crushing season for the adequate maintenance of required bio-mass so that the ETP is able to take the load/shock when it receives the pollution load/effluent at the start of the crushing season.	the compliance status as on 18.10.2024 was as follows: *"At the time of visit, the unit was non-operational due to off-season. Team observed that the ETP was under stabilization and aeration was being done to maintain active bio mass to enable smooth ETP operations in the crushing season. For the maintenance of adequate bio-mass aeration tank was found operational.* *Sample was collected from the aeration tank and the analysis results are as follows:* *MLSS = 1625mg/l* *MLVSS =1159mg/l* *Analysis results showed MLVSS/MLSS ratio as 0.71 which indicates that unit is in process of developing active biomass for stabilizing ETP prior to commencement of crushing season."* (*ref. pg. 47 of the Final Report*) Further, as per the Reply dated 02.08.2025 filed by the UPPCB in the instant OA, it has been observed that the unit was found closed due to off-season. It categorically notes that the unit was found complying with treated effluent discharge norms. The Report further notes that ETPs have started one month before the beginning of crushing season so that it has

<table>
<tr><td></td><td>sufficient bio - mass. It is operated one month after the closure of crushing season after the cleaning is completed and the Board has been duly intimated.</td></tr>
<tr><td>All the Units in question must provide for separate Energy Meter for entire ETP setup including its accessory units with data logging facility which shall be inspected by UPPCB and CPCB from time to time.</td><td>Complied.
CPCB in its Final Report dated 19.12.2024 filed before the Hon'ble Supreme Court reported that the compliance status as on 18.10.2024 was as follows:
"The unit has installed separate energy meter for the ETP. The unit has maintained log book for the same. The team has collected log book of energy meter for the month of April 2024 and the details are as follows;
<table>
<tr><td>Month</td><td>Consumption(KWH)</td></tr>
<tr><td>Nov, 2023</td><td>77648</td></tr>
<tr><td>Dec, 2023</td><td>98400</td></tr>
<tr><td>Jan, 2024</td><td>111496</td></tr>
<tr><td>Feb, 2024</td><td>111584</td></tr>
<tr><td>March, 2024</td><td>114160</td></tr>
</table>
From the data it was observed that the energy consumption has been steadily increasing over the past five months. From 77,648 KWh in November. 2023, it rose to 114,160 KWh in March 2024. This represents a consistent upward trend, indicating that the plant has been</td></tr>
</table>

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	using more energy each month." (ref. pg. 47 of the Final Report) The same finding has been recorded by the UPPCB in its Reply dated 02.08.2025. The Report further notes that the unit has installed online continuous effluent monitoring system which is connected to the server of CPCB.
UPPCB must ensure Interlocking of Pollution Control Devices with production processes (one way but not vice-versa) so as to ensure that whenever ETPs/PCDs are intentionally closed, the production also comes to halt.	This condition is neither feasible nor practicable for the unit. The reasons of which are as follows: I. In the case of ***Tandur Citizens Welfare Society Rangareddy District v. State of Telangana,*** as per the directions of this Hon'ble Tribunal, the CPCB, vide Order dated 02.02.2022 constituted a Committee comprising of the representative of NEERI Nagpur, National Chemical Laboratory, Pune, WBPCB, Maharashtra PCB and the CPCB to examine the feasibility of introduction of interlocking systems in various industrial sectors where OCEMS are installed. II. **1st meeting of the Committee** was conducted on 05.02.2022 which observed that implementation of interlocking system to stop production process in case of failure of pollution control system need

	to be implemented based on following considerations: a. Use of interlocking should be between the production process and the emission/effluent control equipment through a PLC and SCADA systems. It is not desirable to use such interlocking with OCEMS. b. Instant shutting down of some industrial processes may pose risk of safety and health hazard to workers, due release of fugitive emissions/gases or discharges. Therefore, interlocking system may not be feasible in sectors such as pharmaceutical, petrochemical, etc. c. Industrial processes are diversified across the sectors and specific arrangements/protocols may be required for each sector. d. Interlocking systems may be implemented in only those industries, where such interlocking systems does not pose risk of safety and health hazard to workers. e. Further, within industry, there is a need to identify feasible process areas where

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	interlocking systems can be implemented effectively and safely f. Interlocking systems may be implemented in phased manner in noncritical processes as part of the production process III. Accordingly, CPCB filed its final report dated 06.05.2022, wherein CPCB has concluded that *"...it is not recommendable to force industries to install interlocking system between OCEMS and production processes, across all the sectors".* IV. The relevant para of Tandur judgement dealing with CPCB's report is reproduced hereinbelow for ease of reference: *"7. Further report has been filed by CPCB on 06.05.2022 with regard to feasibility of interlocking of industrial process with OCEMS and assessment of feasibility of interlocking of industrial processes with OCEMS. Relevant extracts from the report is as follows:—* ..... *During the meetings held on 05.02.2022 and 02.05.2022, the Committee examined the matter and recommended the following:* *iv. The purpose of OCEMS is to regulate and minimize inspection of industries on routine*

	basis by bringing self-discipline in the industries to exercise self-monitoring and compliance. Further, through continuous access of effluent and emission data, SPCBs/PCCs and CPCB also ensure constant vigil on environmental compliance by industries. v. *OCEMS are linked to both CPCB and SPCB servers and SMS messages/alerts get generated in case of value of pollutant parameter exceeds prescribed environmental norms, non-acceptable variations in data and offline behaviour of OCEMS. The existing set up is adequate for self- monitoring and to initiate corrective action, including regulating the production process.* vi. *It is not recommendable to use OCEMS based interlocking for instant shutting down of industrial processes, as the same may pose risk to safety, health hazard and uncontrolled emissions, due to incomplete chemical reactions/processing, especially in the industrial sectors such as chemical industries, copper smelters, thermal power plants etc.* *6. Conclusion:*

Considering the present status of OCEMS and also keeping in view the risk to safety, health hazard and uncontrolled emissions in case of sudden shut-down of processes, it is not recommendable to force industries to install interlocking system between OCEMS and production processes, across all the sectors. *"*

Thus, from a bare perusal of the conclusion of the CPCB report dated 06.05.2022, it can be submitted that industries other cement industries need not be forced to install interlocking systems.

A copy of the aforesaid judgement along with CPCB's report dated 06.05.2022 and 08.02.2022 is annexed herewith as marked as **Annexure 7 (Colly.)**.

V. No requirement of Interlocking Systems provided in Charter 2.0 of CPCB

- It is submitted that even the CPCB's Comprehensive Charter for Water Conservation and Pollution Prevention by Sugar Industries (Charter 2.0) issued in July 2024, and then in May 2025, does not contemplate any such requirement of

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interlocking of the pollution control plants/devices and the production process.

A copy of the CPCB's Comprehensive Charter for Water Conservation and Pollution Prevention by Sugar Industries (Charter 2.0) is annexed herewith and marked as **Annexure 8**.

VI. Expert Opinion sought from Shri Narendra Mohan, Former Director of National Sugar Institute, Kanpur ("NSI Kanpur")

- An opinion was sought from Shri Narendra Mohan on the technical feasibility of Inter-locking of effluent treatment and air emission control system in a Sugar Unit & Distillery, as directed in NGT's Order.
- *Vide* a letter dated 01.02.2025, Shri Mohan's opinion are as follows:
  - i) The raw materials used for production of sugar i.e., sugarcane and other process intermediaries such as sugarcane juice, syrups, etc. deteriorate upon retention. Thus, continuity in operation is a must for sugar units and sugar units cannot be equated with other industries viz.

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	cement, textile, electrical and electronics and so on. ii) If because of any temporary issue with pollution control devices, the production process is stopped, it will result in decomposition of process house liquors as reflected from deterioration of bag-able sugar to the extent of almost no commercial use. For e.g., Sucrose starts getting inverted the moment manufacturing process is stopped and thus, in such a situation, stagnated material would require removal through deep cleaning of the entire plant before it is to be operated again. iii) Any stoppage in manufacturing process will cause huge loss to the sugar unit due to loss of sugar and miscellaneous other losses due to suspension of crushing operations and expenses on cleaning. iv) Therefore, considering "*the perishable nature of raw materials and many other relevant factors e.g. power generation to meet captive requirements and also to export, necessitating it to be a continuous operation, interlocking of sugar production process in sugar units with pollution*

	control devices <u>does not seem to be feasible</u>." v) In any case, as data related to emissions is regularly transmitted to CPCB/SPCB through OCEMS, any deliberate or accidental stopping of pollution control devices shall be explicitly clear to the CPCB/SPCB enabling them taking any appropriate action as they may deem fit. vi) Pertinently, "*even as per the latest issued "Sugar Charter 2.0" there is no provision of interlocking of Effluent Treatment Plant and/or Air Emission Control System and the Charter 2.0 is silent on this issue meaning thereby no such regulation is required to be imposed.*" A copy of the opinion sought from expert authority, Shri Narendra Mohan, Former Director of National Sugar Institute, Kanpur on the technical feasibility of Inter-locking of effluent treatment and air emission control system in a Sugar Unit & Distillery is annexed herewith and marked as **<u>Annexure 9</u>**. ➢ From the aforesaid, it can be safely concluded that OCEMS are enough to monitor the pollution control devices and it is not feasible

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	for the units to implement a system for interlocking of the pollution control plants / devices and the production process, as directed by the NGT.
Regular inspections should be carried out by the statutory authorities in both halves of the crushing season and also at least once in non-crushing season.	**Complied.** CPCB in its Final Report dated 19.12.2024 filed before the Hon'ble Supreme Court reported that the compliance status as on 18.10.2024 was as follows: *"During crushing season 2023-24, sampling was carried out six times i.e. on 19-01-2024, 29-01-2024, 07-02-2024, 14-02-2024, 24- 02-2024, 06-03-2024 by UPPCB. Unit was found complying standards during all these inspections. Analysis reports are attached at Annexure 3E-a, 3E-b, 3E-c, 3E-d, 3E-e & 3E-f.* *Also, third party technical institutes authorised by CPCB carried out annual inspection on 17-01-2022 & 15-02-2023 and unit was found complying standards during both inspections. The reports are attached at Annexure 3E-g & 3E-h." (ref. pg. 48 of the Final Report)* Further, the UPPCB Repply dated 02.08.2025 clearly states that regular inspections are being carried out by UPPCB and third party

	institutions and the unit has been found compliant.

B) Status of compliance of recommendations made by CPCB in its Final report submitted before the Hon'ble Supreme Court

Respondent No. 1 (Dhampur Sugar Mills Ltd., Unit-Asmoli, District Sambhal)	
The unit shall maintain the ash disposal record with respect to disposal and distribution.	**Complied.** In view of the said recommendation, the Respondents have maintained the record of the fly-ash generated from boiler. The fly-ash are mixed with filter cake and provided to farmer to be used as organic manure. The Respondent No. 1 and 3 maintain records of generation as well as disposal of fly-ash. The said records were also provided to CPCB during the Joint Inspection visit. A copy of the fly ash generation and distribution records maintained by the Respondent No. 1 for the time period November 2024 to March 2025 is annexed herewith and marked as **Annexure 10 (Colly)**. This aspect has been corroborated by the UPPCB Reply dated 02.08.2025 wherein it has been stated that the ash generated from the

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	industry is given directly to the needy farmers through tractor—trolleys and log books are maintained.
Unit shall implement a system for interlocking of the pollution control plants / devices and the production process, as directed by Hon'ble NGT-PB	There are several challenges and difficulties, as have been explained above, in adopting the interlocking systems. The contents of the response in table A, **"Status of compliance of Directions passed by this Hon'ble Tribunal's *vide* its order dated 01.09.2021"** above of the instant affidavit are reiterated and not repeated herein for the sake of brevity.
Unit shall comply with following EC conditions: i. Install CAAQMS stations as per EC condition. ii. Make provision for rainwater harvesting as per EC condition.	**Partially complied.** **I. Installation of CAAQMS devices** Respondent No. 1 *vide* its letter dated 05.02.2025 issued to the State Environmental Impact Assessment Authority ("**SEIAA**"), Uttar Pradesh, stated that they have obtained the requisite environmental clearance for expansion of the existing Sugar unit. In pursuance thereto, the Respondent No. 1 *inter alia* sought that the technical requirement to install CAAQMS be amended to identifying AAQ Monitoring Stations as per CPCB Guidelines and conducting regular monitoring of the same. However, the same could not be taken up for consideration as the SEIAA and State Level Expert Appraisal Committee ("**SEAC**") had dissolved due to the

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	expiry of their statutory mandate, and is pending consideration. However now the new SEAC and SEIAA has been constituted on 26.08.2025 and therefore the same proposal shall be pursued diligently. A copy of the letter dated 05.02.2025 issued by the Respondent No. 1 to the State Environmental Impact Assessment Authority, Uttar Pradesh, is annexed herewith and marked as **Annexure 11**. **II. Provision for rainwater harvesting** The Respondent No. 1 unit has adopted Ponds in nearby villages for artificial recharge of rainwater. The same is evident from the No Objection Certificate obtained from the concerned official of the respective village and the observation made in this regard in the Water Audit Report prepared as per the Guidelines of CGWA. Further, the Respondent No. 1 unit also conducts regular cleaning & desilting work of Pond during summer season. Arrangement for collection of rainwater from Godown section in its Injection Channel & Spray Pond has also been made. When the sugar season is not in operation, the stored rainwater is used in water trials of the vessels & equipment. The no objection certificate received by the Respondent No. 1 from the concerned official of

	the villages wherein ponds have been adopted is annexed herewith and marked as **Annexure 12 (Colly)**. A copy of the Water Audit Report prepared as per the Guidelines of CGWA is annexed herewith and marked as **Annexure 13**.
Respondent No. 3 **(Dhampur Sugar Mills Ltd., Unit-Meerganj, District Bareilly)**	
The unit shall maintain the ash disposal record with respect to disposal and distribution.	**Complied** In view of the said recommendation, the Respondents have maintained the record of the fly-ash generated from boiler. The fly-ash are mixed with filter cake and provided to farmer to be used as organic manure. The Respondent No. 1 and 3 maintain records of generation as well as disposal of fly-ash. The said records were also provided to CPCB during the Joint Inspection visit. A copy of the fly ash generation and distribution records maintained by the Respondent No. 3 for the time period November 2024 to March 2025 is annexed herewith and marked as **Annexure 14 (Colly).** This aspect has been corroborated by the UPPCB Reply dated 02.08.2025 wherein it has

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	been stated that the ash generated from the industry is given directly to the needy farmers through tractor—trolleys and log books are maintained for the same.
Unit shall implement a system for interlocking of the pollution control plants / devices and the production process, as directed by Hon'ble NGT-PB	There are several challenges and difficulties, as has been explained above, in adopting the interlocking systems. The contents of the response in table A above, of the instant affidavit are reiterated and not repeated herein for the sake of brevity.
Unit shall comply with following EC conditions: i. Install CAAQMS stations as per EC condition. ii. Make provision for rainwater harvesting as per EC condition.	**Partially complied** **I. Installation of CAAQMS devices** Respondent No. 3 *vide* its letter dated 05.02.2025 issued to the State Environmental Impact Assessment Authority, Uttar Pradesh, stated that they have obtained the requisite environmental clearance for expansion of the existing Sugar unit. In pursuance thereto, the Respondent No. 3 sought that the technical requirement to install 3 CAAQMS in consultation with UPPCB be amended to identifying AAQ Monitoring Stations as per CPCB guidelines and conducting regular monitoring of the same.

The State Environmental Impact Assessment Authority, Uttar Pradesh, *vide* its letter dated 24.05.2025 informed the Respondent No. 3 that SEIAA in its meeting held on 09.05.2024 and SEAC on its meeting dated 01.04.2025 allowed the proposed amendment sought by Respondent No. 3.

A copy of the Respondent No. 3's letter dated 05.02.2025 issued to the State Environmental Impact Assessment Authority, Uttar Pradesh is annexed herewith and marked as **Annexure 15**. A copy of the letter dated 24.05.2025 issued by the State Environmental Impact Assessment Authority, Uttar Pradesh, to the Respondent No. 3 is annexed herewith and marked as **Annexure 16**.

II. Provision for rainwater harvesting

The Respondent No. 3 unit has adopted a Pond in Sadat village for artificial recharge of rainwater. The same is evident from the observation made in this regard in the Water Audit Report prepared as per the Guidelines of CGWA.

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	A copy of the Water Audit Report prepared as per the Guidelines of CGWA is annexed herewith and marked as **Annexure 17.**

19. Thus, from the above-mentioned tables, it is evident that the Respondent Nos. 1 and 3 have complied with all of the directions passed by this Hon'ble Tribunal *vide* its order dated 01.09.2021, except for the direction of interlocking pollution control devices, which in our humble submission is neither feasible or practicable for the unit and the CAAQMS Installation for Asmoli Unit, for which the Respondent No.1 has already sought waiver and the same is pending before the SEIAA. The detailed explanation for this has been provided in the above-mentioned table.

20. Further, in the case of '*Naresh Kumar v. State of U.P. & Ors., OA No. 291 of 2022*' i.e., another proceeding that was ongoing before this Hon'ble Tribunal involving the Respondent No. 1, the UPPCB on 13.01.2023 carried out an inspection on the site of Respondent No. 1 and noted that the Respondent No. 1 was found compliant with all prescribed norms. Subsequently, on the basis of the aforesaid report, this Hon'ble Tribunal disposed of the OA. A copy of the status report

dated 13.01.2023 filed by the UPPCB in *Naresh Kumar v. State of U.P. & Ors., OA No. 291 of 2022* is annexed herewith and marked as **Annexure 18**. A copy of the order dated 19.01.2023 passed by this Hon'ble Tribunal in the aforesaid OA is annexed herewith and marked as **Annexure 19.**

21. The Respondents Nos. 1 and 3 crave leave of this Hon'ble Tribunal to add further facts and submissions, if required, at a later stage and during the hearing of the instant OA. The Respondent No.1 and 3 crave leave to respond to any submissions made by any other party against the Respondent no.1 and 3 in the present proceedings. Further, the Respondents Nos. 1 and 3 crave leave of this Hon'ble Tribunal to file any additional documents as deemed fit in the interest of justice to assist this Hon'ble Tribunal in the effective adjudication of the instant OA.

DEPONENT

VERIFICATION

I, the deponent hereinabove, do hereby verify that the contents of this affidavit of compliance which is based on official record and information available in the office are true and correct to the best of my knowledge and belief. Nothing material has been concealed therefrom.

Verified at New Delhi on this 15 NOV 2025 day of November, 2025.

DEPONENT

I identified the deponent who has signed in my presence

NOTARY
ANJANA SHUKLA
Advocate
Notary
Govt. of India
G.B. Nagar
Regd. No. 8363
Validity 2027
GOVT. OF INDIA

ATTESTED

ANJANA SHUKLA
Advocate Notary
Distt. Gautam Budh Nagar (U.P.)

15 NOV 2025

Annexure 1

BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH
NEW DELHI

Original Application No.539/2019
(I.A.No.376/2020)

IN THE MATTER OF:

Adil Ansari
S/o Mohd. Naushad Ansari
Mob: 9614861414
Add: 2 New Silampur, Garhi Medhu
New Delhi-110053 Applicant

Verses

1. **M/s Dhampur Sugar Mills Ltd., Asmoli (Sugar Unit)**
   Asmoli- Madhan Road, Asmoli
   Dist- Sambhal (U.P) 244304

2. **M/s Dhampur Sugar Mills Ltd., Dhampur (Sugar and Distillery Unit)**
   Dhampur, Dist- Bijnor (U.P) 246761

3. **M/s Dhampur Sugar Mills Ltd., Meerganj**
   Sindhauli Road, Meerganj
   Dist- Bareilly (U.P) 203504

4. **District Magistrate**
   Collectorate, Behjoi
   Dist- Sambhal (U.P) 244302

5. **District Magistrate**
   Collectorate, Dist- Bijnor (U.P) 246701

6. **District Magistrate**
   Collectorate, Station Road
   Civil Lines, Dist- Bareilly (U.P) 243001

7. **Central Pollution Control Board**
   Through its member Secretary
   "Parivesh Bhawan" East Arjun Nagar
   Near- Karkarduma Court, Shahdara
   Dist- East Delhi, 110092 (New Delhi)

8. **Uttar Pradesh Pollution Control Board**
   Through its Member Secretary
   Building No. – TC-12-V, Vibhuti Khand
   Gomti Nagar, Dist- Lucknow (Uttar Pradesh) 226001

9. **Central Ground Water Authority**
   Wing -3, West Block-2, Sector – 1
   R.K. Puram, New Delhi - 11006 Respondent(s)

Counsel for Applicant(s):
Ms. Preeti Singh, Advocate

Counsel for Respondent(s):
Mr. Raj Kumar, Advocate for CPCB.
Mr. Pradeep Misra and Mr. Daleep Dhyani, Advocates for UPPCB.
Mr. A.A. Aron, Advocate for M/s. Dhampur Sugar Mills Ltd.
Mr. Sandeep Singh, Advocate for the State of UP.

JUDGMENT

PRESENT:

HON'BLE MR. JUSTICE ADARSH KUMAR GOEL, CHAIRPERSON
HON'BLE MR. JUSTICE SUDHIR AGARWAL, JUDICIAL MEMBER
HON'BLE MR. JUSTICE M. SATHYANARAYANAN, JUDICIAL MEMBER
HON'BLE MR. JUSTICE BRIJESH SETHI, JUDICIAL MEMBER
HON'BLE DR. NAGIN NANDA, EXPERT MEMBER

Reserved on: 23rd July, 2021
Pronounced and uploaded on: 01st September, 2021

BY HON'BLE MR. JUSTICE BRIJESH SETHI, JUDICIAL MEMBER

1. Vide this judgment, we shall dispose of Original Application No. 539/2019 and also Interim Application No. 376/2020 filed by the applicant Mr. Adil Ansari seeking directions of this Tribunal to direct the appropriate penal action against the units of the respondents including the imposition of the appropriate environmental compensation for non-compliance of Environmental norms/laws. It was further prayed that action be taken against the violators under relevant provision of The Environment (Protection) Act 1986, Air (Prevention and Control of Pollution) Act, 1981 and Water (Prevention and Control of Pollution) Act, 1974

2. The brief facts as stated in the original application bearing no. 539/2019, are that damage to environment has been caused by units of Dhampur Sugar Mills and distillery which are as follows:-

> *"1. Dhampur Sugar Mills, Sugar Unit, Dhampur, Bijnore;*

2. Dhampur Sugar Mills, Distillery Unit, Dhampur, District Bijnor;
3. Dhampur Sugar Mills, Sugar Unit, Asmoli, Sambhal;
4. Dhampur Sugar Mills, Sugar Unit, Meerganj, Barielly."

3. It is submitted that respondent units are so unconscionable that despite specific orders by this Tribunal, they have failed to adhere to environmental norms. The environmental damage done by respondent units is massive and if no immediate steps are taken against these industrial units/respondents, substantial environmental damage will be caused to the entire area which comprises of natural flora fauna, agricultural land, human beings, animals and water bodies. Since all these industrial units have completely failed to abide by the environmental norms, the continuous increase in heavy toxic pollution by these industries in their respective areas has led to a substantial increase in air and water borne diseases.

4. It may be pointed out that these Units have earlier history of violation of environmental laws. In Year 2015, an Original Application. bearing no. 35/2015 was also filed by one Mr. Shailesh Singh titled "*Shailesh Singh vs. D.S.M. Sugar Distillery Division Asmauli, Sambhal, U.P. & Ors."*.

5. In the said matter, the Tribunal after hearing the contentions of parties and considering the inspection report, had ordered for closure the unit vide order dated 23.04.2015 which runs as follows;

"	***Date and Remarks***	***Orders of the Tribunal***
	Item No. 12 April 23, 2015 SS	*We have heard the Learned Counsel appearing for parties. The report of the Joint Inspection Team has been filed on record. In terms of this*

		report the DSM Sugar Distillery Division unit is not adhering to the prescribed norms. The sample collected and analysed by the Joint Inspection Team is beyond the prescribed limits for different parameters. It is further stated that treated effluent from ETP is not meeting the criteria for the BOD and TSS for disposal on land. The treated effluent storage tank with capacity of 24000 KL was damaged. *Furthermore, there was short circuiting at the primary clarifier Unit. DG set was not equipped with acoustic enclosure.* *The Learned Counsel appearing for the industries submits that they will be conducting effective steps in terms of the recommendation made.* *Further the Applicant contended that the Groundwater has been polluted to the extent that the population of the nearby localities is suffering from Cancer and some other diseases. It is their contention that there is serious air pollution. Allegations made by the Applicant are of course denied by the industry respondents. In the circumstances afore-stated we direct that this industry shall be closed forthwith. However, industry has liberty to take remedial measures and apply to the Joint Inspection Team for a fresh inspection. The inspection would be conducted by the Joint Inspection Team only in furtherance to the order of the Tribunal. Recommendation of the Joint Inspection Team then would be placed before the Tribunal. Liberty to the Respondent industry to move the Tribunal for seeking permission to operate after achievement of the prescribed standards in respect of its effluent as per the prescribed norms and carrying out rectification of various defects and deficiencies pointed out in the inspection. Both Sugar and Distillery units will remain closed.* *With the above directions the*

		Original Application No. 35 of 2014 as well as all other M.A. No. 348 of 2015 and M.A. No. 349 of 2015 are disposed of. Liberty to Applicant to move as prayed.

"

6. Against the said order the industrial unit/respondent had preferred a review application no. 13 of 2015 in original application No. 35/2015 wherein this Tribunal after observing the **'environmental damage'**, caused by this Industrial Unit had passed the following order on 10.12.2015.

> *" Thus, we have to apply the above principals while directing the industry to pay environment compensation in terms of Section 15 and 17 of the National Green Tribunal Act, 2010. In view of our discussion, we pass the following order:-*
>
> 1) *The Industry is permitted to start its manufacturing activity.*
>
> 2) *Before commencing its sugar manufacturing and distillery it must comply with the discrepancies pointed out by the Joint Inspection Team.*
>
> 3) *The Unit will be inspected by the Joint Inspection Team immediately upon commencement gets operative.*
>
> 4) ***The industry is held to be liable pay the Environmental Compensation of Rs. 1 Crore within one month to UPPCB and furnish a bank guarantee as well to the extent of Rs. 10 lakh**.*
>
> 5) *The amount of Rupees One Crore paid to the UPPCB shall be spent upon taking preventive measures, removing of the various pollutants lying in the area, as well as steps for restoring of the environment and ecology as per the records of this file and ensure that no sludge spent wash, fly-ash or other pollutants generated by this industry is permitted to remain in the soil, ground water and even on the land of the industry.*
>
> 6) *If the unit performs strictly within the prescribed parameters and as per the conditions imposed and is found to be compliant and non-polluting industry, the bank guarantee could be released after a period of two years, failing which the bank guarantee shall be encashed and the amount utilized for prevention and control of pollution in that area."*

7. It is the case of the applicant that even after above observation/order from the Tribunal, the unit did not bother to comply with environmental norms. The respondent units are still polluting the surrounding area and the pollution caused by these units is directly impacting the health of the villagers and new born children. It is further submitted that despite protest by villagers, these respondent units have ignored the environment issue.

8. It has further submitted that notices under Section 5 of the Environment (Protection) Act, 1986 were issued against the respondents and the same run as follows:

Name of Industries/ Date	***Contents***
1). M/s Dhampur Sugar Mills Ltd., Vill-Asmoli, Dist-Sambhal (Sugar Division) ***(20 May 2019)***	***AND** WHEREAS, the unit was inspected by CPCB on 18.03.2019 in which the unit was found operational and following key observations are made by the inspection team:* *1. The analysis of treated effluent samples showed pH- 7.36 against the norms of 5.5-9.0, BOD: 19mg/ml against the norms of 30mg/l; TSS- 12mg/l against the norms of 30mg/l; COD-68mg/l against the norms of 250mg/l and TDS- 680mg/I against the norms of 2100 mg/l which indicates compliance with respect to discharge norms of Environment (Protection) Rules 1986.* *2. Analysis of treated effluent samples of lagoon showed pH- 7.58, BOD- 11mg/l, COD-60mg/l, TSS- 26mg/1 and TDS-836 mg/1.* *3. Mill has installed the flow meters but not maintained the logbook of hot and cold water and effluent generation.* *4. The mill should install flow meter at power turbine and process cooling tower make-up.*

	5. Logbook should be maintained for after consumption at various points as sugar plant, cogeneration and residential. *6. The Unit is having high pressure boiler and should install the CPU for treatment of condensate to ensure its reuse and recycle within the process.* *AND NOW, THEREFORE, in view of above observation and in exercise of the power delegated to the Chairman, CPCB under section 5 of the Environment (Protection) Act, 1986, the unit M/s Dhampur Sugar Mills Ltd., Asmouli, Sambhal, U.P. is directed to comply of the following direction:* *1. The unit shall install Condensate polishing Unit for the Highpressure boiler.* *2. The unit shall maintain logbooks of cold and hot water consumption.* *3. The unit shall maintain logbooks for individual process units for recording daily water consumption and effluent generation also.* *4. The unit shall submit the implementation status of charter in the form of Affidavit and documentary proof of the completion of work as committed in the action plan.*
2) M/s Dhampur Sugar Mills Ltd., Dhampur Dist. Bijnor (U-.P.) (Distillery Division) ***(06 February, 2018)***	***Whereas,*** *as per the methodology for assessing penalty and environmental compensation, the environmental compensation to be levied to the unit is calculated as Rs. 46,80,000/- (Forty- Six lakhs eighty thousand Rupees only) for the non-compliance period (11.11.2018 to 15.04.2019), for the crushing season 2018-19 ; and* ***NOW, THEREFORE****, in exercise of powers delegated to Chairman CPCB under section 5 of the Environment (Protection) Act, 1986, the unit (M/s Dhampur Sugar Mills, Dhampur,* ***Binor****, U.P.) is directed close down its manufacturing operations immediately and* ***deposit*** *Rs. 46,80,000/- within 15 days in CPCB A/c No. 532702050000164 (Bank name: Union Bank of India, IP Extension Branch,*

	Vikas Marg, Extn., Delhi; IFSC: UBINO553271)/ demand draft in favour of EC by CPCB towards environmental compensation and shall comply with the following direction; *1. The unit shall close down its sugar manufacturing operations with immediate effect and shall not resume its operations.* *2. The unit shall dismantle the bypass arrangements and stop discharge of untreated/ partially treated effluent discharge immediately.* *3. The unit shall install flow meters at Mill, fibrizer, power turbine cooling, B and C massecuite cooling, and outlet of R.O. water reject.* *4. The unit shall install condensate polishing unit for high pressure boilers, 105 kg/cm2.* *5. The unit shall install adequate Multi grade filter and Activated carbon filter.* *6. The unit shall install mechanical sludge handling system of adequate capacity.* *7. The unit shall seek permission from CPCB, after compliance of the above directions, before resumption of operation.*
3. M/s Dhampur Sugar Mills (DSM) Ltd. (Formerly J.K. Sugar Limited), Sidhauli Road, Meerganj, Bareilly (U.P.) (Sugar Division), ***(15 March, 2018)***	***WHEREAS,** the unit was inspected on 28.03.2019 by officials from CPCB, Delhi and following observations are made:* *1. The unit was operational at the time of inspection.* *2. Analysis of treated effluent sample from ETP outlet showed pH-7.40 against the norms of 5.5-8.5, BOD- BDL mg/l against norms of 100 mg/l, COD- 10.9 mg/l against norms of 250 mg/l, TDS- 452 mg/l against norms of 2100 mg/l, and TSS- 27.4 mg/l against norms of 100 mg/l. However, MLSS in aeration tank 2018) was 1291 mg/l which indicated that the aeration tank was unstabilized. Further, Significant reduction of BOD (100%), COD (99:93%), TSS 98.1%) along with low MLSS level indicate that the ETP system was*

	diluted. *3. Analysis of treatment effluent sample from lagoon showed pH-7.52 against the norms of 5.5-8.5, BOD-BDL mg/l against norms of 100 mg/l, COD- 8 mg/1 against norms of 250 mg/l, TDS- 465 mg/l against norms of 2100 mg/l and TSS- 54.4 mg/l against norms of 100 mg/L.* *4 BOD level is below detection limit at different treatment operations, It seems that unit has diluted ETP system at different stages.* *5. As reported unit representative, the boiler ash and press mud are provided to local farmers for blending in their agricultural field/ land filling. But the unit was unable to provide any documentary evidence for the same.* *6. The flow observed at the ETP outlet is equal to that at the ETP inlet even though the spray pond treated effluent is also being dis charged into the ETP.* *It is evident that aeration tank to ETP system is not properly stabilized due to poor operation and maintenance of ETP system there is possibility of dilution of ETP system.* ***NOW, THEREFORE,** in view of the above observations and in exercise of the powers, delegated to the Chairman, CPCB under Section 5 of the Environment (Protection) Act, 1986, notice is hereby served to the unit (M/s Dhampur Sugar Mills, (DSM) Ltd., U.P.) to Show cause, why the unit should not be closed down until all the necessary pollution control measures are planned and implemented so as to comply with the prescribed effluent discharge standards notified under Environment (Protection) Act 1986 to satisfaction of CPCB.*

9. Applicant has submitted that the respondent units are violating the fundamental rights of the villagers as they are unable to get healthy

pollution free environment. In these circumstances, it is prayed that these Units are required to be shut down with immediate effect.

10. It has next submitted that because of these Units, the entire area is facing the problem of contaminated water. The toxic discharge directly into drain/river and the discharge of industrial effluent in the land has affected the soil properties.

11. It is, therefore, prayed that direction be issued for closure of respondent units and heavy compensation be imposed upon these Units for non-compliance of Environmental norms/laws. It was further prayed that action be taken against the violators under relevant provision of The Environment (Protection) Act 1986, Air (Prevention and Control of Pollution) Act, 1981 and Water (Prevention and Control of Pollution) Act, 1974.

12. Vide order dated 27.06.2019, notices were issued to the respondents for 19.07.2019 in the present Original Application no. 539/2019.

13. On 19th July, 2019, the matter was adjourned for 14.08.2019. On 14.08.2019, the following order was passed:-

> *"1. Grievance in this application is that M/s Dhampur Sugar Mills Ltd. (Sugar Division), District Sambhal and sugar mill units in District Bijnor and District Bareilly and Distillery in District Bareilly were operating in violation of environmental norms. The unit at Dhampur was directed to be closed earlier vide order dated 23.04.2015 passed by this Tribunal and was allowed to reopen by subsequent order subject to certain conditions, including payment of Rs. 1 Crore towards environmental compensation and furnishing a bank guarantee of Rs. 10 lakhs. However, the pollution still continues to operate without compliance of conditions. Other units in Bijnor and Bareilly Districts are also operating illegally and so is the Distillery unit in Bareilly District.*

2. On 27.06.2019, Notice was issued by this Tribunal with reference to the allegations in the application. Reply has been filed by the UP State PCB which is practically of no value. Reply has been filed by the CPCB is that the closure directions have been issued in respect of Dhampur unit of Sugar Mill. Besides, show cause notices have been issued to other two Sugar Mills at Bareily and Sambhal. Distillery unit at Bareilly is non-functional on account of off season.

3. Let the CPCB and State PCB furnish a further joint factual and action taken report with regard to all the four Units (three sugar mills and one distillery unit) by 30.11.2019 by e-mail at judicial-ngt@gov.in.

List for further consideration on 11.12.2019."

14. On 11th December, 2019, the matter was adjourned for 04.02.2020 and thereafter, it was taken up on 03.07.2020 and thereafter on 09.11.2020. The order dated 09.11.2020 is a very detailed one and sums up all the proceedings which have taken place right from the inception of the case till the said date.

15. The order dated 09.11.2020 passed by Ld. Principal Bench runs as follows;

"1. The issue for consideration is the remedial action for violation of environmental norms by M/s Dhampur Sugar Mills Ltd. (Sugar Division), District Sambhal, sugar mill units in District Bijnor and District Bareilly and Distillery in District Bareilly.

2. The matter has been earlier considered by several orders including orders dated 14.08.2019, 04.02.2020 and 03.07.2020. It will be suffice to reproduce the relevant part from the said orders. Order dated 14.08.2019 is as follows:-

"1. Grievance in this application is that M/s Dhampur Sugar Mills Ltd. (Sugar Division), District Sambhal and sugar mill units in District Bijnor and District Bareilly and Distillery in District Bareilly were operating in violation of environmental norms. The unit at Dhampur was directed to be closed

earlier vide order dated 23.04.2015 passed by this Tribunal and was allowed to reopen by subsequent order subject to certain conditions, including payment of Rs. 1 Crore towards environmental compensation and furnishing a bank guarantee of Rs. 10 lakhs. However, the pollution still continues to operate without compliance of conditions. Other units in Bijnor and Bareilly Districts are also operating illegally and so is the Distillery unit in Bareilly District.

2. On 27.06.2019, Notice was issued by this Tribunal with reference to the allegations in the application. Reply has been filed by the UP State PCB which is practically of no value. Reply has been filed by the CPCB is that the closure directions have been issued in respect of Dhampur unit of Sugar Mill. Besides, show cause notices have been issued to other two Sugar Mills at Bareily and Sambhal. Distillery unit at Bareilly is non-functional on account of off season.

3. Let the CPCB and State PCB furnish a further joint factual and action taken report with regard to all the four Units (three sugar mills and one distillery unit) by 30.11.2019 by e-mail at judicial-ngt@gov.in."

3. Order dated 04.02.2020 is as follows:-

"4.0 M/s Dhampur Sugar Mills Ltd (Sugar Unit), Dhampur, Bijnor – Inspected on 27.11.2019 and 28.11.2019

4.8 Observations

i. The Unit and ETP were found operational during the inspection.

ii. The Unit have valid consent to operate issued by UPPCB, under of Water Act and Air Act till 31.12.2019.

iii. The primary clarifier was found non-operational during inspection. However, as per analysis report of sample collected from ETP outlet, TSS was below detectable limit, therefore the possibility of dilution cannot be ruled out.

iv. The Unit has not installed flow meters at Mill Fibrizer, Mescuite cooling and RO reject as it was recommended in validation report of ETP for session 2018-19 by National Sugar Institute (NSI), Kanpur.

v. The Unit has not installed the Hazardous tank in the boiling house.

vi. The treated effluent is stored in lagoon of 4000 KL capacity for utilization for irrigation purposes.

vii. The Unit has provided Kachcha lagoon (for storage of treated effluent) having lining of PVC sheets, which is not proper and it may result in leaching under wear & tear condition.

viii. The Unit has installed two dryers (for baggase), using the flue gases from stack of the boiler. The utilization of boiler ash at bio-compost site was observed and transport receipts were verified and found matching.

ix. The Unit has not yet installed the Condensate Polishing Unit (CPU) for high pressure boilers (105 Kg/cm2).

x. The Unit has installed additional MGF and ACF for tertiary treatment as the installed capacity of MGF and ACF was inadequate.

xi. The mechanical sludge handling system for better management of sludge waste is not provided by the Unit. As reported by representative of the Unit, the purchase order has been issued for Decanter of 6 m3 per hour capacity.

xii. The Unit has not provided and did not maintained the logbook for the generation and disposal of ETP sludge, Boiler ash and other solid wastes.

xiii. The unit is yet to comply with CPCB direction dated 01.07.2019 by dismantling the bypass provision. However, during visit the discharge of effluent was not observed by the team.

xiv. The team also collected the wastewater sample from the local drain (Ikara Nalla) flowing adjacent to the Unit premises. The characteristic of the wastewater is as:

Table 4 Characteristics of Wastewater flowing through Ikara drain.

Sampling point	***Latitude/ Longitude***	***pH***	***COD (mg/L)***	***BOD (mg/L)***	***Sulphate (mg/L)***	***TSS (mg/L)***	***TDS (mg/L)***	***NH3-N (mg/L)***	***Phosphate (mg/L)***
Ikara Drain at u/s of the Unit	*29.292038/ 78.510125*	*5.88*	*438*	*122*	*137*	*1200*	*500*	*34*	*3*

Ikara Drain at d/s of the Unit	*29.290151/ 78.5088303*	*7.11*	*776*	*177*	*73*	*1435*	*468*	*35*	*3.1*

xv. The value of COD in the drain waste water is more than that for raw sewage, which shows the addition of industrial effluent in to drain.

xvi. The Unit does not have STP facility for the treatment of domestic wastewater. The domestic waste water is collected, Treated in septic tank and disposed through Soak pits installed in the Units premises.

4.9 Recommendation:

1. The Unit must dismantle the by-pass line provided within the premises and ensure that only treated effluent shall be discharged outside the premises.
2. The Unit shall maintain the log-book for the generation and disposal of ETP sludge, Boiler Ash and other solid wastes.
3. The Unit shall ensure to implement the recommendation made by National Sugar Institute (NSI), Kanpur in validation report of ETP (for season 2018-19).
4. The Unit shall install Condensate Polishing Unit (CPU) for high pressure boilers (105 Kg/cm2).
5. The Unit shall explore the possibility of maximum utilization of treated effluent in different process.
6. The lagoon must be properly lined to prevent leaching/ contamination of ground water.
7. Domestic waste water (sewage) generated within the premises and colony shall be discharged after proper treatment. The Unit shall install Sewage Treatment Plant (STP) for the treatment of Sewage.
8. The Unit shall obtain NOCs from CGWA for withdrawal of groundwater at earliest, as the NOC has already expired in April, 2019.
9. The Unit's NOC from CGWA expired on 27.04.2019, but Unit has continued to withdraw groundwater without valid NOC. The CGWA may be requested to verify the status of ground water recharge by the unit and accordingly EC may be calculated.

4.10 Action taken status

1. In crushing season 2016-17, unit was non-operational during the inspection due to off- season.

CPCB issued compliance direction dated 02.11.2017 under section 5 of the Environment (Protection) Act, 1986 for carrying out adequacy assessment of ETP through govt. repute institutions.

2. In crushing season 2017-18, CPCB issued show cause notice dt.07.05.2018 under section 5 of the Environment (Protection) Act, 1986 to the unit for non-compliance of BOD-53 mg/I against norms of 30 mg/I with surface water discharge norms prescribed under Environment (Protection) Rules,1986.

3. CPCB issued compliance direction dated 16.11.2018 under section 5 of the Environment (Protection) Act, 1986 for implementation of charter.

4. In crushing season 2018-19, unit was found non-complying w.r.t. bypass of untreated effluent. BOD- 56 mg/I, TSS-35 mg/I and CPCB issued closure direction dated 23.04.2019 and 01.07.2019 under section 5 of the Environment (Protection) Act, 1986 and levied Environmental Compensation (EC) of Rs 57,30,000/-.

5. CPCB issued compliance direction dated 06.11.2019 under section 5 of the Environment (Protection) Act, 1986 and levied EC of Rs 16,20,000/- As per the revised policy dated 04.09.2019 and 01.11.2019.

6. The unit deposited EC in ESCROW account and submitted action plan for utilization of the EC amount. Action plan has been evaluated by CPCB and approved for execution.

B. 5.0 M/s Dhampur Sugar Mills Ltd (Distillery Unit), Dhampur, Bijnor

5.6 Observations:

i. On the day of inspection, the distillery unit and spent wash management system were found operational.

ii. The Unit has consent to operate at 200 KLPD under Water Act, 1974 and Air Act, 1981 both having validity up to 31.12.2019. ***(Annexure 2a, 2b).***

iii. The Unit has three bore-wells to meet the water requirement of production and domestic consumption. Out of three bore-wells, only two are in use, as per information

provided by industry officials. Flow meters have been installed on each bore well. Average daily water consumption is calculated as 1234.44 KLPD based on three months (Sept, 2019-Nov, 2019) logbook data of flow meters. However, as per water balance data provided by Unit, fresh water requirement is 1726 KLPD.

iv. The Unit's NOC for groundwater abstraction has expired on 07.04.2019 and it has applied for renewal of NOC on 17.02.2019.

v. Total alcohol production during last six months (May, 2019-Oct,2019) was 36429.06 KL. Therefore the average production is 6071.51 KL/month i.e. 202.38 KLPD.

vi. The Unit has provided production data certified by Excise department, data of raw spent wash generation, details of MEE- concentrate and condensate generation, utilization; as well as spent wash consumption for bio-composting and incineration.

vii. As per adequacy report of Apri1, 2019 prepared by NSI, Kanpur, the adequacy of ZLD system has been certified for 250 KLPD.

viii. The Unit has installed mass flow meters with totalizer at inlet and outlet of SMEE as well as inlet and outlet of IMEE. All mass flow meters are connected to CPCB sever. Mass flow meter readings at the time of inspection is presented below:

Table 8: Details of mass flow meters

SI. No	***Mass flow meter***	***Totalizer reading at inlet***	***Totalizer reading at outlet***
1.	*SMEE*	*1218230.02 MT*	*278455.46 MT*
2.	*IMEE*	*107701 MT*	*33854 MT.*

ix. The raw spent generation as per mass flow meter data during last six months (May, 2019- Oct, 2019) was 3,52,943 MT while concentrated spent wash generation for 6 months is 28736 MT (for 30 °Bx) and 86492 MT (for 58 °Bx) against consumption of 27682 MT in bio-composting and 86442 MT in incineration respectively.

x. As per logbook data of six months, overall average spent wash generation is 9.59 KL per KL of alcohol produced.

xi. As per information provided by industry officials, the average efficiency achieved through SMEE and IMEE is 67.35%.

xii. The concentrated spent wash after third stage evaporator having 30°Bx is utilized for bio composting while concentrated spent wash after the finisher evaporation having 55-60°Bx is incinerated and process condensate is treated in the Condensate-Polishing Unit (CPU).

xiii. At the time of inspection, 120 KLPD distillation Unit with integrated Multi Effect Evaporator (IMEE) was not in operation due to power tripping on 27.11.2019 morning as informed by industry officials. It could only restart on 28.11.2019 afternoon.

xiv. At the time of inspection, the density of spent wash at inlet and outlet of the standalone MEE was 1026.87 Kg/m3 and 1226.89 Kg/m3 respectively.

xv. As per logbook data, average feed to SMEE is 1044 KLPD while average quantity withdrawn after third stage is 287.8 KLPD and average conc. Spent wash from SMEE after fifth stage is 277.7 m3/day.

xvi. The Unit has installed Condensate Polishing Unit (CPU) consisting of three stage RO technology. As per information provided by the industry, the design capacity of the CPU is 2600 m^3/day whereas as per revalidated adequacy report dated 29.05.2019, the design capacity of the CPU is 2500 m^3/day. The sources of effluent coming into CPU include MEE condensate (2100 m^3/day), spent lees (300 m^3/day), cooling tower and boiler blow downs (200 m^3/day). While the RO permeate (2000 m^3/day) is used in process and non-process activities like molasses dilution, cooling tower make up as well as non-process activities like fire safety and gardening, the RO reject (600 m^3/day) is circulated back to the MEE.

xvii. There are total of seven tanks/lagoons of which six tanks for spent wash management are within the Unit premises and one at the bio-compost yard site. Details of the tanks within premise and in bio-compost yard are given below:

Table 9: ***Details of lagoons for spent wash management***

Sl. No.	***Identification***	***Condition during inspection***	***Capacity (as provided by the Unit)***	***Purpose***
1.	*Settling tank*	*Filled*	*2492KL*	*Used as Settling Tank*
2.	*Settling tank*	*Filled*	*3396KL*	*Used as Settling Tank*
3.	*Tank 1*	*Completely filled*	*1500KL*	*Used as buffer tank before SMEE*
4.	*Lagoon 3*	*Half filled*	*6050KL*	*Storage of conc. spent wash, raw spent wash, RO reject*
5.	*Lagoon 4*	*Empty*	*10,000KL*	*Used as standby for storage of spent wash in case of sudden breakdown of operations.*
6.	*Tank 2*	*60% filled*	*400KL*	*Storage of MEE concentrate before bio composting*
7.	*Tank 3*	*Closed tank.* *Conc.Spent wash (slop)*	*207KL*	*Storage-cum- Pump sump of MEE concentrate before incineration.*

On the day of inspection, settling tank-1 (2492 KL) and settling tank-2 (3396 KL) were observed to be full with raw spent wash combined with RO reject and storm water accumulated in open drains in the industry premises.

*Based on above data, total raw spent wash plus CPU (RO) reject stored in all tanks work out to be 10413KL (2492+3396+1500+0.5*6050).*

xviii. There was a 10,000 KL capacity empty lagoon which was informed to be used for storage of effluent in cases of emergency breakdown of ZLD system.

xix. The Consent to Operate does not indicate the amount of spent wash to be utilized in bio-composting and amount to be incinerated. As per revalidated adequacy report submitted in May, 2019, 10.56 M^3/hr of 30°Bx concentrated spentwash is utilized in bio composting while 22.5 M^3/hr of 57.9°Bx is incinerated in incineration boiler while based on logbook data in May,2019, 36.86% is utilized in bio composting while 63.14% is used in incineration, similarly, in June, 2019, 46.93% is used in biocomposting and 53.67% is incinerated. For the period from July, 2019 to October, 2019, 10% of concentrated spentwash is utilized in

biocomposting while 89% of the spentwash is incinerated in slop furnace (as boiler fuel).

xx. The existing active area for bio-composting is 16 acres while required area for 4 cycles of biocomposting is 14.6 acres.

xxi. The unit has installed only one piezowell/piezometer in the bio-compost yard of 10 acres area.

xxii. Incinerator design capacity is 75 TPH with maximum feed rate of 26 MT/hr and at the time of inspection it was operating at feed rate of 18TPH.

xxiii. The Unit uses 25.5 TPH of MEE slop with 13-15 TPH of bagasse as fuel for the incinerator boiler. Flow meter is installed at the feed line of the slop boiler. At the time of inspection, flow meter reading was 1088.77 kg/hr. Around 30 MT/day of ash is generated from the incinerator, which is utilized for mixing with bio-compost and for land filling within the Units premises.

xxiv. The Unit has installed mass flow meters at inlet and outlet of SMEE as well as inlet and outlet of IMEE. Also, PTZ camera is installed at the bio-compost area.

xxv. The Unit has a bottling plant and sample was collected from its final outlet. The effluent from bottling plants collected, pumped and reused into cooling tower. Cooling tower blow down is treated through CPU.

xxvi. At the time of inspection, samples were collected from various locations of the distillery unit to verify the efficiency of the ZLD system. Analysis results are represented below:

Table 10: ***Characteristics of spent wash and other effluents in distillery Unit***

S.No.	Sample location	Parameters					
		pH	COD (mg/l)	BOD (mg/l)	TSS (mg/l)	TDS (mg/l)	TS (mg/l)
1.	Raw spentwash	4.72	154776	-	-	-	167330
2.	MEE feed	5.42	121967	-	-	-	120590
3.	MEE concentrate	5.2	283353	-	-	-	485910
4.	Conc. Spentwash in storage tank	5.04	494155	-	-	-	496010
5.	SW in buffer tank	4.73	192825	-	-	-	196390

6.	SW in lagoon of biocompost yard	4.85	280935	-	-	-	260610
7.	Feed to incinerator	4.85	471987	-	-	-	444270
8.	CPU feed	4.77	2697	1230	15	1548	-
9.	CPU permeate	4.3	1013	323	<10	164	-
10	CPU reject	4.98	9332	5083	<10	4000	-
11.	MEE condensate	3.52	16076	9750	-	756	840
12.	Spent lees	3.76	5668	3200	-	400	488
13.	Final outlet of bottling plant	5.41	333	234	-	-	164

xxvii. As per the analysis report, raw spentwash has COD of 154776 mg/I and total solids 167330 mg/I while raw spentwash stored in buffer tank has COD of 192825 mg/I and total solids of 196390 mg/I.

xxviii. Analysis report indicates that feed to SMEE has COD and TS of 121967 mg/I and 120590 mg/I respectively while concentrated spentwash has COD of 283353mg/I and TS of 485910 mg/I.

xxix. Samples collected from lagoons for concentrated spentwash and spentwash in the lagoon in biocompost yard indicated TS of 496010 mg/I and 260610 mg/I respectively.

xxx. As per the analysis report, CPU permeate has ***pH of 4.3, COD- 1013 mg/I, BOD-323 mg/I*** *and TDS of 164 mg/I and is reported to be used for both process and non-process activities including fire safety and gardening. The quality of treated condensate indicate noncompliance w.r.t land discharge norms.*

xxxi. The analysis report indicate acidic characteristic of CPU permeate, reject, MEE condensate and final effluent from bottling plant.

xxxii. Analysis report of sample collected from final outlet of bottling plant indicated pH 5.41, BOD of 234 mg/I and COD 333 mg/I. It was informed that effluent from bottling plant is stored in a tank and further pumped as cooling tower makeup water.

xxxiii. The team also collected wastewater sample from the local drain (Ikara Nalla) flowing adjacent to the unit premises. The characteristic of the wastewater is as follows:

Sampling point	*Latitude/ Longitude*	*pH*	*COD (mg/L)*	*BOD (mg/L)*	*Sulphate (mg/L)*	*TSS (mg/L)*	*TDS (mg/L)*	*NH3_N (mg/L)*	*Phosphate (mg/L)*
Drain at u/s of the unit	*29.292038 / 78.510125*	*6.88*	*438*	*122*	*137*	*1200*	*500*	*34*	*3*
Drain at D/s of the unit	*29.290151 / 78.5088303*	*7.11*	*776*	*177*	*73*	*1435*	*468*	*35*	*3.1*

5.7 Recommendations.

1. The utilization of CPU permeate having pH of 4.3, COD- 1013 mg/I against 250 mg/I and BOD-323 mg/I against 100 mg/I in non-process activities like gardening, is a violation of ZLD norms and should be stopped immediately.

2. The Unit's NOC from CGWA expired on 07.04.2019, but Unit has continued to withdraw groundwater without valid NOC. The CGWA may be requested to verify the status of ground water recharge by the unit and accordingly EC may be calculated.

3. Based on the available active area for biocomposting (16 acres), Unit can have lagoon capacity of ~9675 M³ for 30 days' storage of conc. spentwash (30°Bx) and 3116 M³ for seven days' storage of concentrated spentwash (55 °Bx) in compliance to CPCB direction dated 07.12.2015. The extra lagoon of capacity 10,000 m³ shall remain vacant and not be used without obtaining permission from UPPCB.

4. The Unit should install three piezowells around biocompost yard as per SOP for distilleries.

5.8 Action taken status of CPCB on M/s Dhampur Sugar Ltd (Distillery Sector), Bijnor

1. The Unit was issued Show Cause Notice dated 06.02.2018 for noncompliance to direction dated 14.06.2017 issued under Section 5 of Environment (Protection) Act, 1986.

2. The Show Cause Notice was revoked on 08.08.2018 following compliance to CPCB direction dated 06.02.2018.

5.9 Action taken status of UPPCB on M/s Dhampur Sugar Ltd (Distillery Sector), Bijnor, U.P

1. Based on inspection carried out by UPPCB officials on 02.08.2019, a Show cause notice dated 13.08.2019 along with imposition of environmental compensation of Rs. 6,75,000/- has been issued to the Unit for violation of ZLD norms, illegal disposal of spentwash in agricultural fields of nearby village-Fena, Chandpur.

C. 6.0 M/s Dhampur Sugar Mills Ltd (Sugar Unit), Asmoli, Sambhal.

Observations

i. The manufacturing unit and ETP were found operational during the inspection.

ii. The Unit have CTO (Consent to Operate) under Water Act, 1974 and Air Act, 1981 valid till 31.12.2019.

iii. The Unit has installed flow meters at fresh water, cold water and hot water consumptions points as recommended by National Sugar Institute (NSI), Kanpur.

iv. The Unit has installed three (3Nos) of Hazardous tanks with capacity of 43m^3, 27m^3 and 36m^3 for collecting of wash water generated during chemical /mechanical cleaning of evaporators.

v. The treated effluent from ETP is stored in a lagoon of 16000 KL capacity for utilization for irrigation purposes.

vi. The Unit has installed two dryers (for baggase), using the flue gases from stack of the boiler. Dryers were found operational.

vii. Wet scrubber (common to 70 TPH & 50 TPH boilers) was not in working condition.

viii. The Unit has installed two stage, 2Nos Reverse osmosis (RO) plants for the treatment of 2 nos boilers blow down.

ix. A new MGF (Multigrade Filter) and ACF (Activated Carbon Filter) for tertiary treatment was under

installation as the installed capacity of existing MGF and ACF was inadequate.

x. The Unit has not provided/maintained the logbook for the generation and disposal of ETP sludge and other solid wastes. However, for boiler ash disposal, documents of transportation and receipts were shown and verified with logbook at Bio- compost yard site of distillery of M/s Dhampur group.

xi. The team also collected the sample from drain (Lat. 28.711214, Long. 78.544426) flowing adjacent to the Unit premises. The characteristic of the wastewater is as:

Table 14: Characteristic of wastewater flowing through drain adjacent to M/s Dhampur Sugar Mills Ltd., Asmoli

Sampling point	***pH***	***COD (mg/L)***	***BOD (mg/L)***	***Sulphates (mg/L)***	***TSS (mg/L)***	***TDS (mg/L)***
Drain after mixing	*7.85*	*70*	*15*	*238*	*44*	*1236*
Drain /sewage	*7.45*	*195*	*97*	*16*	*99*	*700*
Ponding, in Sot river	*7.82*	*73*	*12*	*127*	*39*	*1204*

xii. The Unit does not have facility for the treatment of domestic wastewater and untreated sewage is discharged and mixed with treated effluent of the sugar Unit.

Recommendations:

1. Unit shall maintain the log-book for the generation and disposal of ETP sludge and other solid wastes including boiler ash generation.

2. Unit should install Condensate Polishing Unit (CPU) for high pressure boilers (105 Kg/cm2) to treat process condensate for reuse in process. This will help in reduction of fresh water consumption.

3. The Unit must ensure the maximum reuse of treated effluent in process.

4. Wet scrubber (attached to Boilers 70TPH & 50TPH) should be made operational before start of the attached boiler.

5. All domestic waste water generated within the Unit's premises and residential colony shall be discharged after proper treatment. The Unit shall install Sewage Treatment Plant (STP) of adequate capacity for the treatment of domestic wastewater.

6. The Unit shall obtain NOCs from CGWA for withdrawal of groundwater at earliest as the CGWA NOC has already been expired in May, 2019.

7. The Unit's NOC from CGWA expired on 02.05.2019, but Unit has continued to withdraw groundwater without valid NOC. The CGWA may be requested to verify the status of ground water recharge by the unit and accordingly EC may be calculated.

6.10 Action taken status

1. In crushing season 2016-17, unit was found non-complying w.r.t. discharge standard and CPCB issued show cause notice dt.16.01.2017 under section 5 of the Environment (Protection) Act, 1986.

2. CPCB issued direction dated.29.06.2017 under section 5 of the Environment (Protection) Act, 1986 for carrying out adequacy assessment of ETP through govt. repute institutions.

3. CPCB issued compliance direction dated 02.11.2017 under section 5 of the Environment (Protection) Act, 1986 for carrying out adequacy assessment of ETP through govt. repute institutions.

4. In crushing season 2017-18, unit was found non-complying w.r.t. bypass of untreated effluent and CPCB issued closure dt.07.02.2018 under section 5 of the Environment (Protection) Act, 1986.

5. CPCB issued compliance direction dated 22.10.2018 under section 5 of the Environment (Protection) Act, 1986.

6. In crushing season 2018-19, unit was found complying and CPCB issued compliance direction

dt.20.05.2018 under section 5 of the Environment (Protection) Act, 1986.

D.7.0 M/s DSM Sugar Meerganj, Sidhauli Road, Meerganj, Bareilly,

7.8 Observations

i. The manufacturing unit and ETP were found operational during the inspection. The inflow to ETP (flow meter reading) during the inspection was observed 34.0 m^3/hour which is equivalent to 616 KLD against the installed capacity of 1000 KLD ETP.

ii. The oil skimmer in oil grease trap was not properly installed and the level of effluent was at bottom/ below the belt.

iii. MLSS growth in Aeration tank was observed satisfactory.

iv. The Unit has not installed flow meters at power turbine cooling, boiler, wet scrubber, B & C Massecuite cooling as it was recommended by National Sugar Institute (NSI), Kanpur in validation report of ETP for season 2018-19.

v. The Unit has installed MGF and ACF for tertiary treatment.

vi. The mechanical sludge dewatering/handling system for better management of wet sludge is not provided by the Unit.

vii. The Unit has not provided/maintained logbook for daily effluent generation and treatment, disposal of ETP sludge, Boiler ash and other solid wastes.

viii. A part of Cooling Tower overflow is being mixed with raw effluent and the rest is being treated in lamella through a separate channel. The channel carrying Cooling Tower overflow to raw effluent channel should be regulated by valve or sluice gate which may be controlled once Unit starts making refined sugar using Double Sulphitation Process.

ix. The Unit was bypassing the untreated effluent through a pipeline laid underground up to Peelakhar

River in Sindholi Village (Lat: 28.556169 and Long: 79.241446) which ultimately meets River Ramganga. This was shown to the Unit's representatives, who accepted the discharge of wastewater and they explained that the PVC pipeline is laid for disposal of storm/rain water from the mill premises to Peelakhar.

x. Samples of untreated effluent bypassed through PVC pipe and flowing through a drain were collected by the CPCB team. The characteristics of the effluent are is given below:

Table 18: ***Characteristics of by-passed effluent by M/s Dhampur Sugar Mills Ltd., Meerganj***

Sample Analysis	***pH***	***COD (mg/l)***	***BOD (mg/l)***	***TSS (mg/l)***	***TDS (mg/l)***	***Sulphate (mg/l)***	***Color (Hazen)***
Multiple outlet/bypass ***(drain)***	*5.40*	*1306*	*890*	*248*	*2464*	*274*	*216*
Multiple outlet/bypass ***(pipe)***	*5.33*	*1640*	*967*	*212*	*2412*	*220*	*237*

xi. Samples were also collected from the upstream and downstream of the Peelakhar river where the effluent from the bypass line was meeting with the river water. Analysis results of the water are provided in the following table. The high value of BOD and COD in down stream of the confluence point of bypass line and river shows the impact of untreated effluent being discharged by the Unit.

Table 19: Water quality of river Peelakhar

Sampling point	***pH***	***COD (mg/L)***	***BOD (mg/L)***	***Color (Hazen)***
River Peelakhar at u/s bypass line	*8*	*BDL*	*BDL*	*BDL*
River Peelakhar at u/s bypass line	*7.7*	*37*	*5.3*	*BDL*

xii. The Unit does not have facility for the treatment of domestic wastewater. Untreated domestic effluent was found being discharged outside the premises of the Unit through a hole in the wall of the Unit.

7.9 Recommendations:

1. It is proposed that direction under section 18(1)(b) shall be issued to UPPCB to take appropriate action to stop discharge of wastewater in river Peelakhar and to levy environmental compensation of suitable amount to the Unit for illegal discharge/bypass of untreated effluent.

2. The Unit must dismantle the bypass line (PVC pipe) from the premises to the river Peelakhar and ensure that the untreated/partially treated effluent shall not be discharged outside the premises in any case.

3. Unit must take corrective measures to prevent the leaching of untreated effluent into the soil/ ground water.

4. Unit shall maintain the logbook for the generation and disposal of ETP effluent, sludge, Boiler Ash, hazardous waste and other solid wastes.

5. Unit shall ensure to implement the recommendations made by National Sugar Institute (NSI), Kanpur in validation report of ETP for session 2018-19.

6. Unit shall install the flow meters at the places as recommended by the National Sugar Institute (NSI), Kanpur.

7. All domestic wastewater generated within the premises and colony shall be discharged after proper treatment. The Unit shall install Sewage Treatment Plant (STP) for the treatment of domestic wastewater.

7.10 Action taken status

1. In crushing season 2016-17, unit was found complying and CPCB issued compliance direction dated 08.11.2017 under section 5 of the Environment (Protection) Act, 1986 for carrying out adequacy assessment of ETP through govt. repute institutions.

2. In crushing season 2017-18, unit was found non-complying and CPCB issued show cause notice dt.15.03.2018 under section 5 of the Environment (Protection) Act, 1986 for non-

compliance w.r.t. BOD-31.2 mg/I, TSS- 111 mg/I, MLSS-684mg/I.

3. CPCB issued compliance direction dated 26.10.2018 under section 5 of the Environment (Protection) Act, 1986 for charter implementation.

4. In crushing season 2018-19, CPCB issued show cause notice dt.14.06.2018 under section 5 of the Environment (Protection) Act, 1986 for low MLSS-1291mg/I in aeration tank and BOD at outlet was found BDL and TSS-27.4 mg/I which showed chances of dilution.

5. CPCB issued compliance direction dated 09.08.2019 under section 5 of the Environment (Protection) Act, 1986.

6. In crushing season 2019-2020, unit was found non-complying w.r.t. bypass of untreated effluent and CPCB issued direction under section 18 (1) (b) on 02.01.2020 to UPPCB. In compliance, UPPCB has imposed EC of Rs. 17,70,000/- vide letter dated 21-01-2020 to the unit."

4. Last order dated 03.07.2020 is as follows:-

"4. Accordingly, a further report has been filed by the CPCB on concluding as follows:

"Compliance status of the units are as follows:

a. ***UPPCB has imposed Environmental Compensation of Rs. 17,70,000/- on M/s Dhampur Sugar Mills, Sugar Unit, Meerganj, Bareilly.*** *Unit has deposited the same and by-pass line has been permanently removed.*

b. UPPCB has issued directions to M/s Dhampur Sugar Mills (Distillery Unit) Dhampur, Bijnore vide letter dated 17-06-2020 under Section 33A of Water (Prevention and Control of Pollution) Act, 1974 as amended to utilize the excess stored 1100 KLD and also submit time bound action plan for dismantling the excess storage capacity.

c. ***UPPCB vide letter dated 17-06-2020 has issued directions to M/s Dhampur Sugar Mills, Sugar Unit, Dhampur, Bijnore to deposit the EC amount of Rs. 16,20,000/-*** *imposed by CPCB immediately in the account of UPPCB in compliance of directions of Hon'ble NGT.*

d. UPPCB vide letter dated 17-06-2020 has ***asked CGWA for imposition of EC on M/s Dhampur Sugar Mills, Sugar Unit, Asmoli, Sambhal due to withdrawal of Ground Water without NOC.***

e. The M/s Dhampur Sugar Mills Ltd. (Sugar unit), Asmoli, Sambhal Moradabad was not found by passing the effluent in the joint inspection.

f. The status of NOC from CGWA is as follows:

- *M/s Dhampur Sugar Mills Ltd (Sugar Unit), Dhampur, Bijnor has obtained NOC from CGWA.*
- *M/s Dhampur Sugar Mills Ltd (Distillery Unit), Dhampur, Bijnor has obtained NOC from CGWA.*
- *M/s DSM Sugar Meerganj, Sidhauli Road, Meerganj, Bareilly has obtained NOC from CGWA.*
- *M/s Dhampur Sugar Mills Ltd (Sugar Unit), Asmoli, Sambhal applied NOC from CGWA. UPPCB vide letter dated 17-06- 2020 has asked CGWA for imposition of EC on M/s Dhampur Sugar Mills, Sugar Unit, Asmoli, Sambhal due to withdrawal of Ground Water without NOC.*

5. The above shows that while for two units, compensation has been assessed by the State PCB, for the other two units, compensation has been left to be determined by the CGWA. There is no consistency. If in two cases, the State PCB has assessed compensation, there is no reason why for other two units it should not have done so. It is also not clear whether the compensation is as per norms and covers the entire period of illegal drawl of ground water and whether the deterrence factor has been taken into account.

6. Let the State PCB take further action which may be overseen by the CPCB. The CPCB may after coordination with the State PCB furnish a further action taken report before the next date by e-mail at judicial-ngt@gov.in preferably in the form of searchable PDF/ OCR Support PDF and not in the form of Image PDF.

5. Accordingly, the CPCB has filed its report dated 05.10.2020:-

"Based on the deliberations held in meeting, following decisions were made:

1. UPPCB would request District Collector and CGWA for calculating and levying EC as per the Hon'ble NGT order dated 28.08.2019 in the matter of Paryavaran Suraksha Samiti & Anr. Versus Union of India & Ors, OA. No. 593 of 2017, which authorizes District Collector/ CGWA to levy EC for illegal extraction of ground water.

2. UPPCB was requested to give a statement to CPCB mentioning that UPPCB has not assessed or levied EC on these units.

3. UPPCB was requested to incorporate their stand/opinion about levying of EC for ground water extraction and also the referred Hon'ble NGT order dated 28.08.2019 which authorizes COW Al District Collector to assess and levy EC in the point-wise compliance report (as per the recommendations of the committee) to be submitted by them to CPCB by 25.09.2020.

4. UPPCB was requested to update CPCB about the deposition status of the levied Environmental Compensation as per the compliance report.

As decided in the meeting, UPPCB sent its comments on the issue raised in the meeting submitting that UPPCB had sent two letters to CGWA, dt 17.06.2020 (Annexure-lV) and 21.09.2020 (Annexure-V) requesting to levy EC on M/s Dhampur Sugar Mills Ltd (Sugar Unit), Asmoli, Sambhal for extraction of ground water without obtaining NOC as CGWA is the authority to levy EC for illegal extraction of ground water. Also, UPPCB submitted updated compliance status report of the units as per the recommendations of joint inspection team to CPCB, which is annexed as Annexure-VI. As per the aforementioned report, all 04 units have complied with the recommendations of the Joint Inspection Team.

CPCB respectfully submits that out of 04 units in the matter, only M/s Dhampur Sugar Mills Ltd (Sugar Unit), Asmoli, Sambhal has not obtained NOC from CGW A. Rest all three units have already obtained NOC from CGW A for extraction of ground water. ***Therefore, EC for the illegal extraction of ground was is to be levied on the sugar unit, M/s Dhampur Sugar Mills Ltd (Sugar Unit), Asmoli, Sambhal for which CGW A is required to calculate the amount. The EC already levied on the two units (Mis Dhampur Sugar Mills Ltd (Sugar Unit),***

Meerganj, Bareilly and M/s Dhampur Sugar Mills Ltd (Sugar Unit), Dhampur, Bijnor) as mentioned above was for noncompliance with respect to environmental norms. Now, this Compliance Report is submitted in compliance of Hon'ble NGT order dated 03.07.2020."

6. I.A. No. 376/2020 has been filed on behalf of the applicant on 06.11.2020 inter-alia as follows:-

A. M/s Dhampur Sugar Mills (Sugar Unit), Dhampur, District – Bijnor

"1 to 7. xxx……xxx ……xxx

(8) That some of the major violations /non-compliances committed by the said unit as observed by the said joint inspection team during the said Joint Inspection are as follows:

(i).The unit has not installed-flow meters at Mill Fibrizer, Mescuite Cooling and RO Reject as it was recommended in validation report of ETP for session 2018-19 by National Sugar Institute (NSI), Kanpur;

(ii). The Unit has not installed the Hazardous Tank in the boiling house;

(iii). The unit has provided kachcha lagoon (for storage of treated effluent) having lining of PVC sheets, which is not proper and it may result in leaching under wear & tear condition;

(iv). The unit has not yet installed the Condensate Polishing Unit (CPU) for high pressure boilers (105 kg/cm^2);

(v). The Mechanical Sludge handling system for better management of sludge waste is not provided by the unit.;

(vi). The unit has not provided and did not maintained the log book for the generation and disposal of ETP sludge, Boiler ash and other solid waste;

(vii). The unit is yet to comply with CPCB direction dated 01.07.2019 by dismantling the by-pass provision.

9. That as per the aforesaid Compliance Report dated 19.06.2020 submitted by the CPCB before this Hon'ble Tribunal, the so called "Action Taken" by the statutory

authorities i.e. the CPCB as well as the UPPCB against the said unit of the Respondent No.1 is to impose an Environmental Compensation of Rs.16,20,000/- (Rupees Sixteen Lakhs and Twenty Thousand only) for 54 days (28.03.2019 to 20.05,2019).

10….xxx……xxx ……xxx

11. That said Letter dated 06.11.2019 issued by the CPCB is a follow-up Letter of the previous Letters dated 23.04.2019 and 01.07.2019 issued by the CPCB. That a perusal of the aforesaid Letters i.e. Letter dated 23.04.2019; Letter dated 01.07.2019 and Letter dated 06.11.2019 issued by the CPCB reveals the below- mentioned facts:

(i). That all the aforesaid Letters i.e. Letter dated 23.04.2019; Letter dated 01.07.2019 and Letter dated 06.11.2019 issued by the CPCB pertains for the "Crushing Season — 2018-2019";

(ii). That said Unit starts its operation /production during the said "Crushing Season — 2018 -2019" on 11.11.2018;

(iii). That inspection of the said unit was conducted by the team of CPCB officials on 28.03.2019 i.e. after approximately 3.5 months after the start of the operation /production by the said unit;

(iv). That during the said inspection conducted on 28.03.2019 by the team of CPCB officials, ***the said unit was found by-passing the untreated effluent through a separate channel into the outside drains adjacent to the premises of the mill;***

(v). That despite the fact that the said unit was found indulged in such a serious violation of "by-passing the untreated effluent", the officials of the CPCB instead of immediately dismantling and sealing the said by-pass arrangement of the said unit, allow the said unit to continue its operation /production and also allow the said unit to continue the by-passing of the untreated effluent during the said crushing season 2018-19 which was initially supposed to end on 15.04.2019;

(vi). That CPCB firstly issued Closure Notice vide the said Letter dated 23.04.2019 i.e. after the initial date of the end of the crushing season 2018-19 which was 15.04.2019 for the said Unit. That the major directions

issued by the CPCB vide the said Letter dated 23.04.2019 are as under:

a) The unit shall close down its sugar manufacturing operations with immediate effect and shall not resume its operation;
b) The Unit shall dismantle the bypass arrangements and stop discharge of untreated /partially treated effluent discharge immediately;

That, further, the CPCB, vide the said Letter dated 23.04.2019, has initially levied an Environmental Compensation of Rs.46,80,000/- (Rupees Forty Six Lakhs and Eighty Thousand only) [for time period from 11.11.2018 to 15.04.2019];

(vii). That although the direction to close down the manufacturing process issued by the CPCB vide the said Letter dated 23.04.2019 after the end of the crushing season (which was initially on 15.04.2019 for the said Unit) is merely a paper formality, however, the said Unit, in utter violation of the said direction issued by the CPCB, continues its operation /production till 20.05.2019;

(viii). That not only the said Unit, in utter violation of the said direction issued by the CPCB vide Letter dated 23.04.2019, continues its operation /production till 20.05.2019, but also the said Unit did not dismantled the said by-pass arrangement and keeps on discharging its untreated effluent through the said by-pass arrangement;

ix) That despite the gross violation of the directions issued by the CPCB vide the said Letter dated 23.04.2019 committed by the said Unit, the only action taken by the CPCB is to issue a second Letter dated 01.07.2019 by which the CPCB has increased the Environmental Compensation to Rs.57,30,000/- (Rupees Fifty Seven Lakh and Thirty Thousand only) [for time period from 11.11.2018 to 20.05.2019];

(x). That once again the CPCB, vide the said Letter dated 01.07.2019, issued direction to dismantle the said bypass arrangement. That, however, the said Unit once again made the mockery of the directions issued by the CPCB and did not dismantled the said by-pass arrangement;

(xi). That, thereafter, the CPCB issued the said Letter dated 06.11.2019 by means of which the CPCB has taken

the so called action against the said Unit. That some of the important "Action Taken" against the said Unit by the CPCB vide the said Letter dated 06.11.2019 are mentioned here-in-under:

(a). The CPCB, vide the said Letter dated 06.11.2019, reduced the said Environmental Compensation from Rs.57,30,000/- (Rupees Fifty Seven Lakh and Thirty Thousand only) to Rs.16,20,000/- (Rupees Sixteen Lakhs and Twenty Thousand only);
(b). The CPCB, vide the said Letter dated 06.11.2019, allow the said Unit to resume its operation for the "Crushing Season — 2019- 20"

(xii) That the CPCB has, vide its said Letter dated 06.11.2019, reduced the Environmental compensation levied on the said Unit on the pretext that the CPCB vide Office Order dated 04.09.2019 has issued a policy for levying Environmental Compensation of industries which prescribe that EC for closure direction issued on the ground on non-compliance of prescribed discharge /emission norms shall be levied for the period between the date of inspection and monitoring to the date of closing of manufacturing operation;

(xiii). That on the pretext of the aforesaid reasoning, the CPCB educed the Environmental Compensation to be levied on the said Unit by reducing the time period of violation /noncompliance i.e. from 191 days (11.11.2018 to 20.05.2019) to 54 days (28.03.2019 to 20.05.2019);

(xiv). That, however, the act of reducing the Environmental Compensation by the CPCB, as aforesaid, on the pretext of its aforesaid Office Order dated 04.09.2019 is illegal, arbitrary and without any basis. That the said Office Order dated 04.09.2019 of the CPCB deals with "EC for closure direction issued on the ground on non-compliance of prescribed discharge /emission norms" which is not the case of the said Unit. That the said Unit was, at the time of inspection held on 28.03.2019, found directly discharging its untreated effluent into the outside drain through by pass arrangement, which is a very serious offence and posses a direct threat to the local Environment and also to the life & health of the local /nearby residents;

(xv). That not only the CPCB has reduced the Environmental Compensation levied on the said unit, as

aforesaid, but also the CPCB has not found the said act of directly discharging its untreated effluent into the outside drain through by pass arrangement committed by the said Unit serious enough to include "Deterrent Factor" while calculating the Environmental Compensation to be levied on the said unit. That the CPCB has simply imposed the reduced Environmental Compensation for 54 days (28.03.2019 to 20.05.2019) without "Deterrent Factor" on the said unit;

(xvi). That moreover, the CPCB vide the said Letter dated 06.11.2019 allowed the said Unit to operate /start manufacturing for the "Crushing Season - 2019-20", as aforesaid. That, however, the CPCB, while allowing the said Unit to operate /start manufacturing for the "Crushing Season - 2019-20" vide the said Letter dated 06.11.2019, has not even bothered to inspect the said unit so as to ensure that whether the said by-pass arrangement has been dismantled by the said Unit or not.

(xvii). That a perusal of the said Letter dated 06.11.2019 issued by the CPCB shows that the CPCB has not even issued direction to dismantle the said by-pass arrangement while allowing the said Unit to operate /start manufacturing for the "Crushing Season - 2019-20" vide the said Letter dated 06.11.2019;

(xviii). That apparently the said by-pass arrangement continued in existence till 03.12.2019 (as mentioned in the said Compliance Report dated 19.06.2020 filed by the CPCB before this Hon'ble Tribunal). That, however, both the statutory authorities i.e. CPCB and UPPCB has not bothered to levy the Environmental Compensation on the said Unit for the time period from 28.03.2019 (date of observation) to 03.12.2019 (date of compliance).

Copies of the Letter dated 23.04.2019, Letter dated 01.07.2019 and Letter dated 06.11.2019 issued by the CPCB (downloaded from the web-site of the CPCB) is annexed as Annexure: A (Cony).

(12). That the other major violation /non-compliance committed by the said Unit, as observed by the said joint inspection team during the said Joint Inspection of the said unit held on 27.11.2019 and 28.11.2019 was to store the treated effluent in a permeable lagoon/kachcha Iagoon which may result in the penetration of the said treated effluent through the ground /soil below and may result in the contamination of the ground water of the area

concerned. That in this context this Hon'ble Tribunal may take note of the below-mentioned submissions of the Applicant:

i. That the said violation /non-compliance committed by the said Unit (to store the treated effluent in a permeable lagoon /kachcha lagoon) was observed by the officials of the CPCB during the inspection of the said Unit held on 22.03.2018;

ii. That the recommendation to store the treated effluent in an impermeable lagoon was made by the NSI, Kanpur in its revalidated adequacy assessment report which was submitted by the said Unit vide Letter dated 10.10.2018;

iii. That the CPCB, vide Letter dated 16.11.2018, issued direction to implement the observations and recommendations made by the NSI, Kanpur in its aforesaid revalidated adequacy assessment report;

iv. That, however, apparently, the said Unit has not complied with the said direction of the CPCB issued vide Letter dated 16.11.2018 and therefore, the said Joint Inspection Team of the CPCB and UPPCB in its said Compliance Report dated 31.01.2020 filed before this Hon'ble Tribunal has observed that the said Unit has provided kachcha lagoon (for storage of treated effluent) having lining of PVC sheets, which is not proper and it may result in leaching under wear & tear condition.

v. That, however, both the statutory authorities i.e. CPCB as well as UPPCB has not taken any action against the said unit for the said violation /non-compliance and the said statutory authorities has not even bothered to impose Environmental Compensation on the said Unit for the said violation /non-compliance.

Copy of the Letter dated 16.11.2018 issued by the CPCB (downloaded from the web-site of the CPCB) is annexed as Annexure: B.

12……xxx……xxx……xxx

13. That with respect to the other violations /non-compliances_ committed by the said Unit, as observed by the said joint inspection team during the said Joint Inspection of the said unit held on 27.11.2019 and

28.11.2019, it is submitted that the direction with respect to the said violations were issued by the CPCB vide its aforesaid Letter dated 16.11.2019, which apparently the said Unit has not complied with. That, however, both the statutory authorities i.e. CPCB as well as UPPCB has not taken any action against the said unit for the said violation /non-compliance and the said statutory authorities has not even bothered to impose Environmental Compensation on the said Unit for the said violation/non-compliance.

14. It is submitted that while imposing the Environmental Compensation on the said Unit for the two major violations committed by the said Unit, namely, (a) by-passing the untreated effluent through a separate channel into the outside drains adjacent to the premises of the mill and (b) to store the treated effluent in a permeable lagoon /kachcha lagoon, the CPCB has violated its own Report /Guideline for EC Calculation"

B. Sambhal Unit-

"21 That the said Unit of the Respondent No.1 has a history of serious violations /non-compliances, however, neither any Environmental Compensation has ever been imposed on the said Unit nor any prosecution proceedings has been initiated against concerned officials of the said Unit by the statutory authorities i.e. CPCB as well as UPPCB.

22. That the inspection of the said Unit of the Respondent No.1 was conducted by the officials of the CPCB on ***08.12.2016.*** *That during the said inspection, the said Unit was found* ***discharging the spray pond overflow outside the premises*** *of the said Unit. That, moreover, during the said Inspection the said Unit was also found non-complying with respect to the prescribed standards of BOD of the ETP effluent sample. That, however, no action was taken against the said Unit by the statutory authorities i.e. CPCB as well as UPPCB and the said Unit was allowed to start its operation vide a letter dated 02.11.2017 issued by the CPCB. Copy of the Letter dated 02.11.2017 issued by the CPCB (downloaded from the web- site of the CPCB) is annexed as* ***Annexure: D****.*

23. That again the inspection of the said Unit of the Respondent No.1 was conducted by the officials of the CPCB on ***10.01.2018.*** *That during the said inspection, the said Unit was again found* ***to be by-passing untreated***

effluent discharge from the spray pond overflow and cooling tower ',lowdown being discharged outside the premises region through the drain — connecting to SOT river which meets river Ganga.

24. That, however, once again the officials of the CPCB neither bothered to dismantle and seal the said by-pass arrangement immediately nor bothered to immediately stop, the manufacturing process of the said Unit, rather the CPCB preferred to issue the direction to close down the manufacturing process and also the direction to dismantle the said by-pass arrangement on 07.02.2018 i.e. approximately after one month of the said inspection.

25. xxx……xxx…… xxx

26. That, till date, the statutory authorities i.e. the CPCB as well as UPPCB, in gross violations of the aforesaid Report / Guidelines for EC Calculation issued by the CPCB, does not bother to conduct a detailed investigation from expert institution / organisation so as to know the actual extent of damage caused to the environment due to aforesaid violation / non-compliance committed by the said Unit, namely, (a) discharging the spray pond overflow outside the premises and (b) by-passing untreated effluent discharge from the spray pond overflow and cooling tower blow-down being discharged outside the premises region through the drain connecting to SOT river which meets river Ganga."

C. Bareilly Unit:-

27. That in compliance of the directions issued by this Hon'ble Tribunal, the joint inspection of the Sugar Unit of M/s Dhampur Sugar Mills situated at Meerganj, District - Bareilly (U.P.) was conducted by the Joint Inspection Team of the CPCB and UPPCB on 29.11.2019.

28. That some of the major violations / non-compliances committed by the said Unit as observed by the said Joint Inspection Team during the inspection of the said Unit conducted on 29.11.2019 are as under:

(i) The said Unit was found by-passing the untreated effluent through a pipeline laid underground up-to Peelakhar River in Sindholi Village which ultimately meets Ramganga River;

(ii) The said Unit was found discharging its untreated domestic effluent outside the premises of the said Unit through a hole in the wall of the said Unit.

29. That the so-called "Action taken" by the statutory authorities i.e. CPCB and UPPCB against the said Unit for committing such serious violations /non-compliances is to impose an Environmental Compensation of Rs.17,70,000/- (Rupees Seventeen Lakh and Seventy Thousand only). That in the case of this Unit of the Respondent No.1 also, the statutory authorities i.e. CPCB and UPPCB does not find the illegal act of "discharging the untreated effluent directly into the River" serious enough to initiate the prosecution proceedings against the officials of the said Unit responsible for the said violation /non-compliance.

30. xxx……xxx…… xxx

31. It is pertinent to mention here that the said Unit of the Respondent No.1 has also a history of violations /non-compliances. That during the inspection of the said Unit by the officials of the CPCB held on 10.01.2017, it was found that the said Unit has not integrated all process stream and route them to ETP. That during the inspection of the said Unit by the officials of the CPCB held on 25.01.2018, the treated effluent sample taken from the outlet of the ETP of the said Unit was found non-compliant with respect to BOD & TSS norms. That officials of the CPCB during the inspection held on 25.01.2018 observed that the aeration tank of the ETP system of the said Unit was not properly stabilised due to poor operation and maintenance of the ETP system and the treated effluent discharged does not meet the prescribed standards. That again during the inspection held on 28.03.2019, the officials of CPCB again observed that the aeration tank of the ETP system of the said Unit was not properly stabilised due to poor operation and maintenance of the ETP system and there is possibility of dilution of ETP system. Copies of the Letter dated 08.11.2017, Letter dated 15.03.2018 and Letter dated 14.06.2019 issued by the CPCB (downloaded from the web-site of the CPCB) is annexed as Annexure: F (Colly).

37 o 36……xxx……xxx xxx

37. That it is pertinent to bring to the notice of this Hon'ble Tribunal, that the case of the Units of the Respondent No.1 is not the only case where the CPCB has shown extreme

leniency /favouritism towards the violator and despite serious violations, has reduced the Environmental Compensation to a great extent by reducing the time period /days of violation on the pretext of the aforesaid Office Order dated 04.09.2019. That the modus — operandi adopted by the officials of the CPCB is same in all such cases, which is as under:

a) Conduct the inspection of the unit of the violator after passing off substantial time period of the crushing season;
b) At first levy Environmental Compensation for whole crushing period on the unit of the violator;
c) Issue Closure Notice after the end of the crushing season;
d) After conducting meeting(s) with the representatives of the violators, reducing the Environmental Compensation substantially by reducing the time period /days of violation on the pretext of the aforesaid Office Order dated 04.09.2019;
e) Finally, resuming the operation /manufacturing of the units of the violators before the next crushing season."

7. No sufficient ground has been explained to meet out the irregularities nor environmental compensation have been calculated by the CPCB and UPPCB for which they are directed to submit a further action taken report on these points.

8. It is further argued that previously joint Committee calculated environmental compensation and later on it was re-examined and re-calculated as per Annexure 1 below which is lower than previous calculation and no sufficient reason has been explained. Either of the two calculations may be wrong. The environmental compensation and its calculation are intended to prevent the further mischief and irregularities by the industrial units and is penal in nature apart from recovering cost of restoration.

Table 1 has been annexed to the IA 376/2020 which is as follows:

S. N.	**Industry Name**	**Operation Period (2018-19)**	**Date of Inspection and Main Observation**	**Closure Notice and E.0 Levied**	**2"[1] Notice Date (Resume Operation) and Reduced E.C.**	**Previous Inspection Date**
1	Anamika Sugar Mills	04.11.2018 To 12.05.2019	29.03.2019 1) Unit was found to	23.05.2019 Rs.57,60,000/-	06.11.2019 Rs.13,50,000/-	Date: 06.02.2018 Unit is **discharging untreated**

	Limited, Bulandshahr (U.P.)		***By-pass dark grey colour waste water/ untreated effluent*** *through a cemented channel under the boundary wall. The* ***untreated effluent*** *was found* ***stored*** *in low-lying* ***non-lined permeable area,*** *across the road;* *2) Mill was* ***discharging colony domestic sewage into road side low lying areas***			***sewage*** *outside the premises* ***through a channel*** *and there is* ***possibility of discharging the untreated effluent*** *of the process or spray pond* ***through this channel***
2	*Avadh Sugar & Energy Limited, Shahjahanpur (U.P.)*	*11.11.2018 to 06.05.2019*	*29.03.2019* *An* ***underground pipeline was traced carrying the industrial effluent from the unit which discharges into the drain behind the unit.*** *It was informed by the local people that the discharge from the said pipeline is made during the night;*	*30.05.2019 Rs.1,39,20,000/-*	*07.11.2019 Rs.11,70,000/-*	*30.01.2018* ***Spray pond overflow is partially bypassed and discharged directly outside the premises through channel into drain which meets Garra River and ultimately to Ganga River;***
3	*Bajaj Hindustan Limited, Shahjanpur (U.P.)*	*10.11.2018 to 22.04.2019*	*Date: 30.03.2019* *Non-compliance with respect to the parameters, namely, BOD and COD of treated effluent samples from lagoon.*	*28.05.2019 Rs.1,28,40,000/-*	*06.11.2019 Rs.7,20,000/-*	*08.03.2018* *1) Non-compliance with respect to the parameters, namely, BOD, COD and TSS of treated effluent samples;* *2) Non-compliance with respect to the parameters, namely, BOD, COD and TSS of treated effluent samples from lagoon.*
4	*Bisalpur Kisan Sahkari Chini Mills Limited, Bilaspur (U.P.)*	*27.11.2018 to 14.05.2019*	*26.03.2019* *1) Unit has* ***multiple outlets for the discharge of treated /untreated effluents;*** ***2) Spray pond overflow is directly discharged*** *outside the unit's premises*	*24.05.2019 Rs.1,37,70,000/-*	*06.11.2019 Rs.16,50,000/-*	*01.02.2018* *1)****Treated effluent*** *from secondary clarifier outlet was found to be* ***discharged directly*** *into the drain;* *2)Inlet channel of*

			without any treatment;			*ETP was found broken and* ***untreated effluent was bypassed to outside nallah;*** *3) Spray pond tank was also found broken and* ***spray pond overflow was bypassed*** *without any treatment to outside nallah.*
5	*Indian Potash Limited (Sugar Unit),Meerut (U.P.)*	*15.11.2018 to 28.04.2019*	*04.04.2019* *1) Non-compliance with respect to the parameters, namely, BOD, COD and TSS of treated effluent samples;* *2) Non-compliance with respect to the parameters, namely, BOD and COD of treated effluent samples from laggon;* ***3)*** *Unit used* ***a Kaccha Lagoon for storage of treated effluent.***	*30.05.2019* *Rs.1,34,10,000/-*	*07.11.2019* *Rs.7,50,000/-*	*05.01.2018* *1) Untreated spray pond overflow is stored in lagoon;* ***2) Untreated effluent*** *from the storage is* ***discharged on land;*** *3)Unit is having two outlets.*
6	*Kisan Sahkari Chini Mill, Amroha (U.P.)*	*06.11.2018 To 12.05.2019*	*26.03.2019* *1) Non-compliance with respect to the parameters, namely, BOD, COD and TSS of treated effluent samples;* *2) Ponding of waste water was observed within the industry premises and analysis result of sample shows BOD — 805 m/l, COD — 1589 mg/l and TSS — 151 mg/l indicating discharge of untreated effluent;* *3) Non-compliance with respect to the parameters, namely, COD and TSS of treated effluent samples from lagoon.*	*28.05.2019 Rs.1,51,20,000/-*	*06.11.2019 Rs.14,40,000/-*	*17.01.2018* *1. Non-Compliance to the parameters, namely, BOD, COD and TSS of treated effluent samples;* *2. Operation and maintenance of in aeration tank of ETP was poor as the MLSS of the aeration tank was 334 mg/l'* *3. Tertiary treatment system was not in use and effluent was discharged from secondary clarifier*

7	Kisan Sahkari Chini Mills Limited Badaun (U.P.)	30.11.2018 to 13.04.2019	26.03.2019 1) **No valid CTO under Water & Air Acts and Hazardous Waste Authorization;** 2) The unit has **not made proper boundary wall to surround the ETP area to avoid the unauthorized encroachment and discharge of treated /untreated waste water;**	21.06.2019 Rs.40,50,000/-	07.11.2019 Rs.5,70,000/-	24.01.2018 1.Treated effluent discharge is 374 l/ton which is higher than permissible limit (200 l/ton); 2. MLSS inaeration tank was 918 mg/l which indicates unestablished ASP system operation and maintenance of ETP system;
8	Kisan Sahkari Chini Mills Limited, Bareilly (U.P.)	28.11.2018 to 12.05.2019	28.03.2019 **1) No valid CTO under Water & Air Acts (CTO expired on 31.12.2017);** **2) Spray pond overflow of unit was being directly discharged outside premises** of the unit without any treatment; **3)** Non-compliance with respect to the parameters, namely, BOD and COD of effluent samples from lagoon.	24.05.2019 Rs.1,31,40,000/-	06.11.2019 Rs.13,80,000/-	24.01.2018 1) Unit has **bypass arrangement for Untreated effluent** through drainage to local drain. Analysis of effluent sample collected from bypass drain showed BOD — 656 mg/l, TSS — 438 mg/l and COD — 1130 mg/l which indicates discharge of **untreated effluent;** 2. Final **waste water discharge is 235 l/ton which is higher than permissible limit**
9	Kisan Sahkari Chini Mills Limited, Najibabad (U.P)	12.11.2018 to 14.05.2019	20.03.2019 1) Non-compliance with respect to the parameters, namely, BOD, and COD of treated effluent sample; 2) Unit has not installed mechanical sludge handling system as well as colour coding in the process pipeline;	23.05.2019 Rs.55,20,000/-	07.11.2019 Rs.15,00,000/-	08.03.2018 1) MLSS in aeration tank was 458 mg/I which indicates unestablished ASP system due to poor operation and maintenance of ETP system; 2) Sludge drying beds were overflowing in ETP plant

10	Kisan Sahkari Chini Mills Limited, Pilibhit (U.P.)	25.11.2018 To 21.04.2019	25.03.2019 **1)** The Unit was found **by-passing untreated effluent into outside nallah;** **2)** Inlet of the **ETP was found with provisions of bypass of the untreated effluent to outside nallah and during visit bypass was observed;** 3) The **spray pond overflow of the unit was being directly discharged outside premises of the unit without any treatment.**	24.07.2019 Rs.1,01,40,000/-	06.11.2019 Rs.37,20,000/-	**01.02.2018** 1.The **treated effluent** from secondary clarifier outlet was found to, be **discharged directly** into the drain; 2.The Unit has **by-pass arrangement for untreated effluent** from spray pond overflow outside the premises 19.12.2018 1) Unit was found operations but the **ETP was found non-operational;** 2) InletLine (Open Channel) of the ETP was found with provision of bypassing the untreated effluent to outside nallah; **3)** The spray pond verflow was being directlydischarged outside the premises of the unit without treatment.
11.	Kisan Sahkari Chini Mills Limited, Shahjahanpur (U.P.)	18.11.2018 To 12.05.2019	30.03.2019 **1)Spray pond overflow was discharged directly without any treatment outside the premises;** **2)The unit has multiple outlets for discharge of effluent;** **3)The unit has permission for one bore- well for ground water extraction from the CGWA but has two functional bore-**	06.06.2019 Rs.1,40,10,	06.11.2019 Rs. 13,20,000/-	29.01.2018 1. Analysis of treated effluent sample shows non-compliance with respect to BOD & COD 2. Analysis of underground water Total Hardness – 270 mg/I, Ca^{2+} - 75.2 and Alkalinity – 357 mg/I, which is higher than the permissible limit.

			well; ***4) Boiler ash is dumped indiscriminately within the premises.***			
12.	*Lakshmiji Sugar Mills Co. Ltd., Raja — ka — Sahaspur, Bilari, Moradabad (U. P.)*	*01.12.2018 To 18.04.2019*	*02.04.2019* *1) Lagoon made for storing treated effluent was found filled with molasses;* *5)The unit discharges treated effluent into a drain (near railway track) outside the premises;* *6)Unlined /permeable lagoon was also observed within the unit's premises near the main gate containing diluted molasses.*	*21.06.2019 Rs.41,70,000/-*	*06.11.2019 Rs.5,10,000/-*	*09.01.2018* *1. The unit does not have valid authorization of HazardousWaste Management;* *2. The treated effluent through the pipeline which opens outside into nearby drain;* *3. At the time of visit, the drain was found carrying the hot effluent being discharged from the industrial premises.* *The drain shortly opens into the Sot River which is a tributary river of River Ganga.*
13.	*P.B.S Foods (Sugar) Pvt. Ltd., Chandpur, District — Bijnor (U.P.)*	*25.11.2018 To 14.05.2019*	*18.03.2019* *1) Channel carrying waste water was observed coming out of the unit's premises and discharging into nearby agricultural fields;* *2) The unit has not installed the spray pond overflow treatment system*	*Rs.1,37,10,000/-*	*Rs.16,20,000/-*	*The unit does not have provision for the treatment of spray pond overflow. The unit has not installed flow meter at the overflow of the spray pond and overflow water is discharged through open drain into a kachcha pond which poses threat to ground water pollution.*
14.	*Rana Sugars Ltd., Rampur (U.P.)*	*15.11.2018 To 09.04.2019*	*03.04.2019* *1) Untreated water was found logged at various places inside the premises of the unit;* *2) Inlet channel was found full and overflowing;* *3) Spray pond overflow was found mixing with the*	*30.05.2019 Rs.43,80,000/-*	*06.11.2019 Rs.2,10,000/-*	*07.03.2018* *1) The unit was in operation. However, ETP was non-operational at the time of inspection;* *2) The unit does not have provision for*

			treated effluent which is directly connected to lagoon.			*treatment of spray pond overflow.*
15.	*Rana Sugars Ltd., Moradabad (U.P.)*	*14.11.2018 To 15.04.2019*	*01.04.2019* *1). Bypass arrangement was identified in ETP inlet line near sugar storage godown which was temporarily blocked by sand bangs.* *2). Water logging of treated/ untreated effluent on open land near industry premises was observed;* *3) Temporary pumping arrangement with flexible pipelines were found inside the premises having outlet in a drain parallel to Industrial premises and along the roadside;* *4) An opening was found in the secondary treated water collection chamber from clarifier which can be directly discharged into outlet slump without treating it from sand and activated carbon filter;* *5) The unit has unlined permeable lagoon outside the premises;* *6) Leakage /overflow from spray pond was observed to be accumulating in a kachcha channel near the spray pond boundary.*	*26.04.2019 & 21.06.2019 Rs.45,90,000/ -*	*07.11.2019 Rs.4,50,000/-*	
16.	*Rudra Bilas Kisan Sahkari Chini Mills Ltd., Bilaspur (U.P.)*	*30.11.2018 To 13.04.2019*	*03.04.2019* *1.Treated effluent are stored in lagoon and utilized in cleaning and irrigation purposes;* *2. Lagoon was found full of algae, no proper cleaning done;*	*12.06.2019 Rs.40,50,000/ -*	*07.11.2019 Rs.3,30,000/-*	*08.03.2018 The unit does not have provision for treatment of spray pond overflow*

17.	*Wave Industries Pvt. Ltd., Bijnor (U.P.)*	*28.11.2019 To 12.04.2019*	*19.03.2019* *The unit was bypassing the untreated effluent from inlet channel of ETP to nearby land and pond in nearby land;*	*06.05.2019 Rs.75,60,000/ -*	*06.11.2019 Rs.14,40,000/*	*16.01.2018 Treated effluent is discharged into a municipal drain by the unit.*
18.	*Wave Industries Pvt. Ltd., Bulandshahr (U.P.)*	*26.11.2018 To 15.04.2019*	*19.03.2019* *The unit has not obtained valid consent to operate under Water Act, 1974 and Air Act, 1981.*	*14.06.2019 Rs.1,13,70,000/-*	*07.11.2019 Rs.8,40,000/-*	*05.02.2018* *The unit was operational. However, ETP was functional and treated effluent was not flowing from outlet of ETP. Therefore, lagoon was empty and sample could not be taken from outlet of ETP due to non-availability of treated water*
19.	*Wave Industries Pvt. Ltd., Dhanaura,* ***J.P.*** *Nagar (U.P.)*		*25.03.2019* ***A channel was found before inlet which should be emptied and dismantled and waste water should be treated through ETP***	*24.06.2019* *Rs.32,10,000/ (30.01.2018 to 16.05.2018) For crushing season 2017-18*	*28.11.2019* *Nil*	*30.01.2018* *1) Huge amount of water logging was found just outside the boundary wall of the industry in an unlined pool, on the north- west side, this area has an opening of pipelines coming from ETP, which as per industry representative is meant for irrigation purposes:* *2) Analysis of sample collected from unlined pool adjacent to boundary wall as found non-compliant with respect to BOD, COD and TSS parameters.*
20.	*Mawana Sugar Mills,*	*04.01.2018 To 16.05.2019*	*26.03.2019* *The unit has open*	*21.06.2019 Rs. 39,90,000/-*	*22.11.2019 Nil*	*04.01.2018* *1) the unit does not have*

	Mawana, (UP)		*pipeline system for transferring effluent to the ETP and some effluent was seen accumulate in the sugar cane field near the ETP inlet drain.*			*provision for the treatment of spray pond overflow;* *2) The unit was bypassing the untreated effluent from the process into the drain outside the premises of the unit in the front gate of the unit* *28.02.2018* *Bypass arrangements opening into outside drain (Municipal Drain was found blocked /closed at the time at inspection. However, an open unlined drain was observed which was opening outside boundary of industry situated around 150-200 meters from Ram Mandir towards the rear side boundary wall in the industry premises and was found discharging into the Mawana drain passing through the field.*
21.	*U.P. State Sugar Corporation Ltd. Meerut (UP)*	*11.11.2018 To 15.05.2019*	*02.04.2019 The unit was bypassing the untreated effluent from ETP inlet channel and equilisation tank of ETP to the adjacent drain (Shekhpur drain) which meet Kadrabad drains and ultimately falls into the East Kali*	*06.05.2019* *Rs. 90,60,000/-*	*07.11.2019* *Rs. 8,70,000/-*	

9. We have heard learned Counsel for the parties appearing before us. Learned Counsel for the applicant submitted that there is large scale violation of Environmental Law as shown by the above table but on account of collusion of the State PCB, no effective steps are taken.

10. Learned Counsel for the State PCB states that according to the understanding of the State PCB, if somebody has applied for extraction of ground water, earlier NOC continues. In the present case, the earlier NOC was upto 02.05.2019 and the unit applied for extension on 04.04.2019 and on that account no action has been taken for illegal extraction of ground water. Reliance has been placed on Notification dated 24.09.2020 issued by the Ministry of Jal Shakti stating as follows:-

> *"11(vi). If the application for renewal is submitted in time and the CGWA/the respective State/UT Authority is unable to process the application in time, No Objection Certificate shall be deemed to be extended till the date of renewal of No Objection Certificate."*

11. As against above, learned Counsel for the applicant submits that this Tribunal has specifically held that ground water can be allowed to be extracted only in the light of water availability data and if water level is at safe levels. No general permission can be granted without evaluation and by default. In this regard, reliance has been placed on the order of this Tribunal dated 20.07.2020 in Original Application No. 176/2015, Shailesh Singh v. Hotel Holiday Regency, Moradabad & Ors. as follows:-

> *"1 to 38..xxx……..xxx……xxx*
>
> *39. In the light of the above discussion, we direct as follows:*
>
> *a. MoJS may ensure requisite manning and effective functioning of CGWA so as to ensure **sustainable ground water management** in terms of the Hon'ble Supreme Court mandate by which CGWA was created.*
>
> *b. Let CGWA and MoJS comply with the directions of this Tribunal in orders dated 3.1.2019, 7.5.2019 and 11.9.2019, to have a meaningful regulatory regime and institutional mechanisms for ensuring prevention of depletion and unauthorized extraction of ground water and sustainable management of groundwater in OCS areas. **Regard must be had to water availability and safe levels to which its drawal***

can be allowed, especially for commercial purposes, based on available and assessed data in each "Assessment unit". *Procedures for assessment of individual applications and institutional mechanism may be clearly laid down.*

c. As per orders dated 3.1.2019, undertaking an impact study in light of projected data for the next 50 years (in phased manner with action plan decade-wise).

d. There must be ***no general permission for withdrawal of ground water, particularly to any commercial entity, without environment impact assessment of such activity on individual Assessment units in cumulative terms covering carrying capacity aspects by an expert committee.*** *Such permission should as per Water Management Plans to be prepared in terms of this order based on mapping of individual assessment units. Any permission should be for specified times and for specified quantity of water and not in perpetuity, and be necessarily subject to digital flow meters which cannot be accessed by proponents, with mandatory annual calibration by authorized agency at proponents' cost.* ***An annual review by independent and expert evaluation must audit and record ground water levels as well as compliance with the conditions of the permission.*** *Such audits must be published online for transparency and to track compliance and year-on-year change in ground water levels, and swift action taken against those who fail audit, including withdrawal of permission, blacklisting, initiation of prosecution and recovery of deterrent compensation as per CPCB regime. Records must be maintained online and for a sufficient and reasonable time.*

e. As observed in para (a) above, ***all OCS assessment units must undergo water mapping. Water Management Plans need to be prepared for all OCS assessment units in the country based on the mapping data, starting with Over-exploited blocks. The Water Management Plans, data on water availability or scarcity and policy of CGWA must be uploaded on its website for transparency and public involvement. Such exercise may be done expeditiously, preferably within next three months."***

12. In view of above, learned Counsel for the applicant submitted that no order to the contrary can prevail in view of Section 33 of the National Green Tribunal Act, 2010 under which the order of this Tribunal has overriding effect over any other order issued under any other law. No executive order can annul the orders of the Tribunal which are binding, unless set-aside by a higher Judicial forum. The direction of this Tribunal under section 15 read with Section 20 of the NGT Act, 2010 is binding on the Ministry of Jalshakti which has to be followed by the State PCB. Moreover, the principle of sustainable development will have no value if ground water is allowed to be extracted merely on account of pendency of an application without evaluation of availability of adequate ground water and compliance of conditions which may be necessary to be laid down. This will also be failure of directions of the Hon'ble Supreme Court requiring the CGWA to regulate extraction of groundwater. We find merit in the contention.

13. Accordingly, we direct the State PCB to take further appropriate action by way of prohibiting any activity in violation of law, initiating prosecution and recovering compensation as per applicable norms, following due process of law. The State PCB may also respond to the IA filed by the applicant with particulars in the table annexed to the application, reproduced above and file an action taken report before the next date by e-mail at judicial-ngt@gov.in preferably in the form of searchable PDF/ OCR Support PDF and not in the form of Image PDF. The CPCB and State PCB may undertake necessary inspection for the purpose.

List for further consideration on 11.02.2021.

A copy of this order be forwarded to the CPCB, the State PCB, the Secretary, Ministry of Jal Shakti and the CGWA by e-mail for compliance.

Adarsh Kumar Goel, CP

S.K. Singh, JM

Dr. S.S. Garbyal, EM

Dr. Nagin Nanda, EM

November 09, 2020
Original Application No. 539/2019"

Reply by CPCB.

16. In compliance of the directions, Central Pollution Control Board has filed its reply dated 26.03.2021. It is submitted that the directions to the M/s Dhampur Sugar Mills Ltd. (hereinafter referred as 'unit') were issued under Section 5 of the Environment (Protection) Act, 1986. As per Section 16 (c) of the National Green Tribunal Act, 2010, National Green Tribunal is the Appellate Authority with respect to the directions issued under Section 5 of the Environment (Protection) Act, 1986.

> *The said section of the National Green Tribunal Act, 2010 is as follows:*
>
> > *"Section 16 (c) Tribunal to have appellate jurisdiction: Any person aggrieved by directions issued, on or after the commencement of the National Green Tribunal Act, 2010, by a Board, under section 33A of the Water (Prevention and Control of Pollution) Act, 1974 (6 of 1974) may, within a period of thirty days from the date on which the order or decision or direction or determination is communicated to him, prefer an appeal to the Tribunal"*

17. It is next submitted that this petition may be rejected as directions have been issued by CPCB & UPPCB in pursuance of orders of the National Green Tribunal, Principal Bench, New Delhi and the petitioner has an alternative, efficacious, legal and speedy remedy available with NGT.

18. It is further submitted that this Tribunal vide order dated 14.08.2019 in the matter of Adil Ansari Vs. M/s Dhampur Sugar Mills Ltd. and Ors. O.A. No. 539/2019 directed CPCB and UPPCB to furnish a joint factual and action taken report with regard to four units (three

sugar mills and one distillery unit) of M/s Dhampur Sugar Mills Ltd. thereafter, both statutory authorities had carried out a joint inspection during 27.11.2019 to 29.11.2019 of the following units:

> *"a. Dhampur Sugar Mills, Sugar Unit, Asmoli, Sambhal*
> *b. Dhampur Sugar Mills, Sugar Unit, Dhampur, Bijnor*
> *c. Dhampur Sugar Mills, Sugar Unit, Meerganj, Bareilly*
> *d. Dhampur Sugar Mills, Distillery Unit, Dhampur, By-nor."*

19. Thereafter, the compliance report was filed by CPCB and UPPCB before this Tribunal on 31.01.2020. The CPCB issued directions to UPPCB vide letter dated 05.03.2020 and 14.05.2020 under Section 18 (1) (b) of the Water (Prevention and Control of Pollution) Act, 1974 to comply with the following;

> *"i. UPPCB shall issue appropriate directions to the four units to ensure compliance of observations/ recommendations made in the joint inspection reports filled in NGT in O.A. No. 539/2019 in the matter of Adil Ansari vs M/s Dhampur Sugar Mills Ltd. and Ors.*
> *ii. UPPCB shall issue appropriate direction to M/s Dhampur Sugar Mills, Sugar Unit, Meerganj, Bareilly, to deposit Rs.16,20,000/- toward EC as levied by CPCB vide direction dated 06/11/2019 under section 5 of Environment (Protection) Act, 1986 into UPPCB account open for such fund.*
> *iii. UPPCB shall take appropriate legal action for closure and prosecution of M/s Dhampur Sugar mills Ltd. (Sugar unit), Asmoli, Sambhal Moradabad and Dhampur Sugar Mills, Sugar Unit, Meerganj, Bareilly, which were found to be bypassing the effluents into drains.*
> *iv. Compensation for withdrawal of ground water without permission will be recovered by these units."*

20. It is further submitted that a joint meeting was convened by CPCB with officials of UPPCB to review the action taken in compliance to this Tribunal's order. The relevant submissions regarding each Unit is as follows.

M/s Dhampur Sugar Mills, Sugar Unit, Dhampur, Bijnor

21. It is submitted that CPCB conducts annual inspection of the sugar units during each crushing season. Generally, the crushing season of sugar units starts from October- December every year and continues up to April-May. A one-month time is necessary by the Sugar unit to stabilize ETP, hence inspection of the sugar units is planned from January to March every year. As there are 122 number of sugar units in Ganga main stem states that are categorized as Gross Polluting Industries (GPIs), these units are inspected as per the schedule prepared based on the work force availability.

22. The inspection of the above unit was undertaken on 28.03.2019 and direct discharge of untreated effluent into the outside drain through by-pass arrangement was found which possess direct threat to the environment.

23. Accordingly, CPCB issued Closure directions on 23.04.2019 to M/s Dhampur Sugar Mills (Sugar Unit), Dhampur, Bijnore under Section-5 of the Environment (Protection) Act, 1986, and imposed Environmental Compensation of Rs. 46,80,000/- after the lab analysis

results confirmed the non-compliance w.r.t effluent discharge standards (period of violation from 11.11.2018 to 15.04.2019).

24. However, since the unit kept operating till 20.05.2019 in violation of the closure directions (as informed vide unit's reply dated 10.05.2019), therefore, CPCB vide its subsequent direction dated 01.07.2019, recalculated the EC amount to Rs. 57,30,000/-considering period of violation from 11.11.2018 to 20.05 2019.

25. The Environmental Compensation has been imposed in compliance to this Tribunal order in the matter of O.A. No. (WP (CIVIL) No. 375/2012), Paryavaran Suraksha Samiti & Anr. Vs. Union of India & Ors., which directed CPCB that:

> *"It may take penal action for failure, if any, against those accountable for setting up and maintaining STPs, CETPs and ETPs. CPCB may also assess and recover compensation for damage to the environment and said find may be kept in a separate account and utilized in terms of an action plan for protection of the environment".*

26. However, some sugar units filed Appeals before this Tribunal vide Appeal No. 34/2019 (WZ) titled M/s Madhukar Sahakari Sakhar Karkhana Ltd. Vs. CPCB, Appeal No. 05/2019 titled Morinda Co-op. Sugar Mills Ltd. Vs. CPCB and Appeal No. 23 of 2019(WZ) against order passed by CPCB requiring the Appellants to pay Environmental Compensation. Thereafter, units namely Shri Vitthalsai SSK Ltd. and Bhairavnath Sugar Works Ltd. approached this Tribunal in Appeal No.

27/2019 (WZ) with Appeal No. 35/2019 (WZ) against the Environmental Compensation levied by CPCB.

27. This Tribunal vide Order dated 22.05.2019 in Appeal No. 27/2019 (WZ) (I.A. No. 49/2019, I.A. No. 50/2019 & I.A. No. 66/2019) with Appeal No. 35/2019 (WZ) (I.A. No.68/2019 & LA. No.69/2019) directed that;

> *"5. CPCB may treat the impugned order as tentative and pass further appropriate order after permitting the affected parties to furnish their viewpoint. The appellant may furnish its viewpoint to the CPCB within two weeks from today. Similar opportunity may also be given to other affected parties where such orders have been passed in connected cases, including Appeal No. 34/2019(WZ), M/s Madhukar Sahakari Sakhar Karkhana Ltd. vs. Central Pollution Control Board, Appeal No. 05/2019, Morinda Coop. Sugar Mills Ltd. vs. Central Pollution Control Board and Appeal23/2019(WZ), Babasaheb Ambedkar SSK vs. The Member Secretary, CPCB & Ors.".*
>
> *6. Till further order is passed by the CPCB, the impugned order may not be given effect. The fresh order may be passed as far as possible within two months. Further, the Hon'ble NGT vide its Order dated 29.07.2019 in Appeal No. 22/2019 (I.A. No.430/2019) with Appeal No. 12/2019 (I.A. No. 391/2019), Appeal No. 13/2019 (I.A. No. 392/2019), Appeal No. 14/2019 (I.A. No. 393/2019), Appeal No. 15/2019 (I.A. No. 397/2019), Appeal No. 16/2019 (I.A. No. 398/2019), Appeal No. 17/2019 (I.A. No. 400/2019) and Appeal No. 18/2019 (I.A. No. 406/2019) in the matter of The Kisan Sahkari Chini Mills Ltd. Vs. The Member Secretary, Central Pollution Control Board & Ors. directed that;*
>
> > *"It is not disputed that the present matters are identical to the one disposed of by this Tribunal vide order dated 22.05.2019 in Appeal No. 27/2019 (WZ), Shri Vitthalsai SSK Ltd. vs. Central Pollution Control Board. Accordingly, these appeals are disposed of in same terms. On the pattern of above orders, the impugned order will he treated as tentative till further order is passed after considering the viewpoint of the appellants. The appellants may furnish their viewpoint to the*

> *Central Pollution Control Board (CPCB) within two weeks. It is made clear that we have not expressed any opinion on the merits."*

28. It is submitted that CPCB vide order dated 04.09.2019, developed the "Policy for levying Environmental Compensation (EC) for industries" to bring uniformity for levying Environmental Compensation (EC) for all industrial sectors. As per policy, one of the conditions to be considered for EC calculation is as follows:-

> *"Unless there is substantial evidence, date of non-complying days would start with effect from date of non-compliance observed during inspection."*

29. Further CPCB held personal hearing of 32 sugar mills on 18.09.2019 and 24.09.2019 in compliance to the NGT order wherein representations were received from individual sugar mills of U.P. Co-operative Sugar Factories Federation Ltd. and Secretary General of UPSMA.

30. It is further submitted that E.C. was recalculated for 32 sugar units including M/S Dhampur Sugar Mills, Sugar Unit, Dhampur, Bijnor, considering the number of days of violation based on the prevailing CPCB policy and Methodology for assessing Environmental Compensation (E.C). Also, 'Deterrent Factor' is not applicable to the unit based on the Methodology for assessing Environment Compensation, Annexure-I, since the unit closed the operation on 20.05.2019 and subsequent crushing season, no illegal discharge was

found during inspection conducted between 26.11.2019 to 27.11.2019.

31. It is submitted that the unit was inspected on 22.03.2018 and found non-complying w.r.t BOD-53 mg/l against the norms of 30 mg/1 at ETP outlet. In response, CPCB issued Show-Cause notice vide its letter dated 07.05.2018 under section 5 of E (P) Act, 1986 to the unit. Thereafter, the unit replied vide letter dated 20.07.2018 and 10.10.2018 confirmed the compliance status and submitted the revalidated adequacy assessment report prepared by NSI, Kanpur. Accordingly, CPCB issued compliance direction to the unit vide its letter dated 16.11.2018.

32. It is submitted that a detailed investigation from expert institution for EC calculation is to be undertaken only in the cases where Intentional discharge to the environment results into acute injury or damage to the environment or if there is injection of treated/partially treated/untreated effluent to ground water as listed in Policy guideline for levying Environmental Compensation for Industries whereas the unit was found non-complying with respect to surface water discharge norms of Environment (Protection) Act, 1986.

33. It is submitted that as per the submission made in the above paras regarding Environmental Compensation, the calculation have been made by CPCB.

M/s Dhampur Sugar Mills (Sugar Unit), Asmoil, Sambhal U.P.

34. It is submitted that inspection of the unit was undertaken on 10.01.2018 and the unit was found by-passing untreated effluent from the spray pond overflow and cooling tower blow down, through the drain connecting to Sot River.

35. CPCB had, therefore, issued direction under section-5 of Environment (Protection) Act, 1986 to the unit vide its letter dated 07.02.2018, for discharging untreated effluent with BOD-577 mg/1 against norms of 30 mg/1 & TSS- 198 mg/1 against the norms of 30 mg/1 through drain and also directed to dismantle the by-pass arrangement.

36. The unit requested to revoke the closure direction vide its letters dated 15.02.2018 & 03.03.2018 and submitted the following;

> *"a. The unit has dismantled the bypass arrangement and has stopped the discharge of untreated effluent*
>
> *b. The unit has upgraded the ETP system up to tertiary treatment level*
>
> *c. The unit has submitted waste water analysis reports from EPA approved laboratory*
>
> *d. The unit has submitted the revalidated adequacy assessment report of ETP & irrigation management plan"*

37. Therefore, the unit was re-inspected on 01.03.2018 by CPCB and it was observed that the unit has dismantled the bypass arrangement and ETP was complying w.r.t surface water discharge norms.

38. The unit had also submitted the revalidated adequacy assessment reports prepared by NSI, Kanpur vide letter dated 18.06.2018.

39. In addition, CPCB constituted an Expert committee comprising members from National Sugar Institute (NSI), Vasantdada Sugar Institute (VSI), IITs and representatives from sugar mills to prepare a charter for water recycling. The unit vide letter dated 01.09.2018 submitted their compliance status of the Charter, which was examined and following observations were made:

> *"1. The unit has installed necessary flow meters at requisite points as prescribed under the Charter.*
> *2. The unit has submitted action plan/ compliance report on up-gradation of ETP.*
> *3. The unit is maintaining proper logbook for bore-well readings thereby recording their fresh water consumption on regular basis.*
> *4. The unit has stated that no untreated/ partially treated effluent is being discharged on land.*
> *5. The unit shall employ hydro-jet for cleaning of heat exchanger unit.*
> *6. The unit has already set up environmental laboratory with dedicated technical staff.*
> *7. The unit has planned to arrange training for its technical staff on ETP Operation and Maintenance.*
> *8. The unit has submitted compliance report on BMT for Water Recycling and Pollution Prevention."*

40. The three Member Committee in its meeting held on 04.10.2018 examined the revalidated adequacy assessment report and implementation status of charter. Based on the recommendations of three Member Committee, CPCB issued revoke direction to the unit under section 5 of the Environment (Protection) Act, 1986.

41. It is submitted that a detailed investigation from expert institution for EC calculation is to be undertaken only in the cases

where intentional discharge to the environment results into acute injury or damage to the environment or if there is injection of treated/partially treated/untreated effluent to ground water as listed in Policy guideline for levying Environmental Compensation for Industries, whereas the unit has found non-compliance with respect to surface water discharge norms of Environment (Protection) Act, 1986.

M/s Dhampur Sugar Mills (Sugar Unit), Meerganj, Bareilly, U.P.

42. It is submitted that a detailed investigation from expert institution for EC calculation is to be undertaken only in the cases where intentional discharge to the environment resulting into acute injury or damage to the environment or if there is injection of treated/partially treated/untreated effluent to ground water as listed in Policy guideline for levying Environmental Compensation for Industries, whereas the unit found non-compliance with respect to surface water discharge norms of Environment (Protection) Act, 1986.

43. It is submitted that the unit was inspected by the officials of CPCB on 10.01.2017 and following observations were made:

> *"1. The unit has generated 236.6 L/T wastewater, which is higher than the permissible limit.*
>
> *2. The unit has not integrated all process streams and route them to ETP."*

44. The CPCB had, thereafter, issued direction dated 28.02.2017 to the unit to ensure compliance of wastewater discharge norms as per the

notification dated January 14, 2016. The unit's reply dated 10.03.2017 was examined by CPCB and, thereafter, CPCB issued closure direction dated 15.05.2017 to the unit and directed the unit to install on-line effluent monitoring system and provide its connectivity to CPCB server.

45. The unit was re-inspected by CPCB officials on 25.01.2018 and found non-complying w.r.t. discharge norms for BOD and COD. The MISS concentration in the aeration tank was very low, i.e. 684 mg/l, leakages were observed from syrup pumps, sulphide used pumps, magma pumps, condensate pumps etc. The unit did not submit the revalidated ETP adequacy assessment report within 45 days to CPCB. Accordingly, CPCB issued Show Cause Notice under section 5 of the Environment (Protection) Act, 1986, dated 15.03.2018 for non--compliance of stipulated standards.

46. In response, the unit submitted revalidated ETP adequacy assessment report and irrigation management plan validated by NSI, Kanpur vide letter dated 15.06.2018.

47. Subsequently, CPCB issued direction dated 26.10.2018 under section 5 of the Environment (Protection) Act, 1986 to the unit to submit the implementation status of the Charter and performance audit of ETP including actual assessment of water consumption & effluent generation duly validated by reputed expert institute namely NSI, Kanpur, VSI, Pune, IITs during crushing season and submit the report to CPCB within 60 days from resumption period.

48. CPCB and UPPCB carried out inspection of all four units of Dhampur Sugar Mills during 27.11.2019 to 29.11.2019 in compliance to NGT order dated 14.08.2019. **M/s DSM Sugar Mills, Meerganj, Bareilly** was inspected on 29.11.2019 and found non-complying w.r.t effluent discharge standards.

49. Accordingly, CPCB directed UPPCB to take necessary action to stop discharge of untreated effluent into river by the unit and levy Environmental Compensation vide its direction dated 02.01.2020 issued u/s 18(1)(b) of the Water (Prevention and Control of Pollution) Act, 1974. In compliance to this direction, UPPCB imposed an EC amount of Rs. 17,70,000/- on M/s Dhampur Sugar Mills, Sugar Unit, Meerganj, Bareilly. The unit deposited the levied EC and informed that bypass line has been permanently dismantled.

50. It is submitted that, as submitted earlier, a detailed investigation from expert institution for EC calculation is to be undertaken only in the cases where intentional discharge to the environment resulting into acute injury or damage to the environment or if there is injection of treated/partially treated/untreated effluent to ground water as listed in Policy guideline for levying Environmental Compensation for Industries, whereas the unit found non-compliance with respect to surface water discharge norms of Environment (Protection) Act, 1986. That, CPCB is empowered under the Environment (Protection) Act, 1986 to take action against industrial units/authorities to ensure

compliance of notified Environmental standards. Also, CPCB is empowered under the Water (prevention and Control of Pollution) Act, 1974 to issue directions to the state boards.

51. It is submitted that CPCB conducts annual inspection of the sugar units during each crushing season. Generally, the crushing season of sugar units starts from October- December every year and continues up to April-May. A one-month time is necessary by the Sugar unit to stabilize ETP, hence inspection of the sugar units is planned from January to March every year. As there are 122 no. of sugar units, in the Ganga main stem states that are categorized as Grossly Polluting Industries (GPIs), the units are inspected as per the schedule prepared based on the work force availability, limited infrastructure facilities at CPCB laboratory to analyze the ETP effluent/Drain samples.

52. It is submitted that CPCB vide order dated 04.09.2019, in compliance of NGT order in the matter of OA No. 593/2017 (WP (CIVIL) No. 375/2012, Paryavaran Suraksha Samiti & Anr. Vs. Union of India & Ors.), constituted a Committee for developing a formula for imposing penalty and Environmental Compensation on industrial units. As per committee recommendation, the following condition shall be considered for EC calculation;

> "Unless there is substantial evidence, date of non-complying days would start with effect from date of non-compliance observed during inspection"

53. In short, the CPCB has justified its stand that the Environmental Compensation imposed by it on the Units is in accordance with law and as per the Office Order dated 04.09.2019, which runs as follows:-

"CENTRAL POLLUTION CONTROL BOARD
DELHI
F.No. B-400(S)/IPC-111/2019-20\162
September 04", 2019
OFFICE ORDER

POLICY FOR LEVYING ENVIRONMENTAL COMPENSATION (EC) FOR INDUSTRIES

In compliance of Hon'ble NGT order in the matter of OA No. 593/2017 (WP (CIVIL) No. 375/2012, Paryavaran Suruksha Sarnia & Anr. Vs. Union of India & Ors.) a Committee was constituted by CPCB for developing a formula for imposing penalty and environmental compensation on industrial units.

As per the Committee recommendations, following cases are considered for levying environmental compensation:

a) Discharges in violation of consent conditions, mainly prescribed standards/ consent limits.
b) Not complying with the directions issued, such as direction for closure due to non-installation of OCEMS, non-adherence to the action plans submitted etc
c) Intentional avoidance of data submission or data manipulation by tampering the Online Continuous Emission/ Effluent Monitoring systems.
d) Accidental discharge lasting for short durations resulting into damage to the environment.
e) Intentional discharges to the environment - land, water and air resulting into acute injury or damage to the environment.
f) injection of treated/ partially treated/ untreated effluents in to ground water.

In the instances as mentioned at a, b and c above, Pollution Index shall be used as a basis to levy the

Environmental Compensations. CPCB has published guidelines for categorization of industries into Red, Orange, Green and White bases on concept of Pollution Index (PI). The Pollution Index is arrived after considering quantity & quality of emissions/ effluents generated, types of hazardous wastes generated and consumption of resources. Pollution Index of an industrial sector is a numerical number in the range of 0 to 100 and can be represented as follows:

PL=F (Water Pollution Score, Air Pollution Score & IIW Generation Score)

Pollution Index is a number from 0 to 100 and increasing value of PI denotes the increasing degree of pollution hazard from the industrial sector.

After considering various factors including the policy implementation issues, Committee has derived following formula for levying the Environmental Compensation in instances as mentioned at a, b and c including non-compliance of the environmental standards / violation of directions.

E C = P I X N X R X S X L F

Where,

PI (pollution Index), N (number of days of violation), R (Rupees factor), S (Scale of operation), L.F (location factor).

In case of d, e and f, the Environmental Compensation may be levied based on the detailed investigations by Expert Institutions/Organizations.

Conditions/policy/operational protocol for levying EC shall be as below:

1. *Prior to imposition of EC, a Show Cause Notice (SCN) for imposing EC alongwith an opportunity to reply/ hearing be given.*

2. *Method adopted for calculation of EC may be shared with the concerned industry/ agency if asked during hearing or through reply.*

3. *Unless there is substantial evidence, date of non-complying days would start w.e.f. date of non-compliance observed during inspection.*

4. *In Sugar industry, number of days of violation is calculated based on actual number of days operated during crushing season(s) based on Excise Form RT-8C submitted by the unit.*

5. *EC for non-compliance to CPCB's closure direction regarding installation & connectivity of OCEMS shall apply till establishment of initial uninterrupted data connectivity for all the specified parameters in all the permitted outlets /stacks, as verified by the IT division.*

6. *EC for the closure direction issued on the ground of non-compliance of prescribed discharge/ emission norms shall apply for the period between date of inspection & monitoring to date of closing of manufacturing operation.*

7. *Direction for closure or revocation and direction for imposition of EC to be dealt separately.*

This issues in supersession of the earlier approach & methodology being followed in calculation of EC amount on the ground of non-compliance of closure direction regarding OCEMS and circular no. B19004/NGRBA/CPCB/2015-16(part file) dated 15.05.2019 regarding calculation of EC amount on the ground of non-compliance of notified norms for sugar mills.

(*Prashant Gargava)*
Member Secretary"

54. In view of the above submissions, it was submitted that CPCB has issued requisite directions from time to time and has imposed adequate compensation as per the order dated 04.09.2019.

Action taken report by UPPCB

55. UPPCB has also filed its action taken report on 22.07.2021 in Compliance of the direction passed by NGT on 09.11.2020. It is

submitted that a joint Inspection of the Unit Dhampur Group was conducted by UPPCB**.** The date of inspection of Dhampur units is tabulated as below:-

M/s Dhampur Sugar Mills Ltd (Sugar Unit), Dhampur, Bijnor	
Date of Inspection	*02-02-2021 and 03-02-2021.*
Major Observations	1. *The analysis result of sample collected from drain coming from colony along front boundary wall of sugar unit shows* ***pH- 4.6, COD-2448 mg/l , BOD-1604 mg/l,*** *which are on higher side of typical sewage characteristics i.e.* ***pH*** *in range of 6.5 to 8.5, BOD in range of 200 mg/l -300 mg/l, COD in range of 400 mg/l -550 mg/l which indicates that the Sugar effluent got mixed with the domestic sewage drain, however no bypass of effluent/waste water was observed from the boundary wall into the drain as the drain was covered.* 2. *The unit has not installed Sewage Treatment Plant (STP) for sewage generated from colony located inside the unit premises; however, the unit provided purchase order of STP (P.O. No.-4100007977) dated 16.10.2020 with capacity of 220 KLD, which was under installation.* ***3.*** *The unit had two lagoons for storage of treated effluent. One with impermeable base having capacity of 10000 m3 and second having PVC sheets with 4000 m3 capacity and retention time of 15 days. The second lagoon was a Kachcha lagoon with improper lining of PVC sheets also mentioned in previous finding. Treated effluent is being used for irrigation purpose.*
Compliance made by the unit w.r.t. recommendations of Joint Team.	
Recommendations	***Compliance verified on inspection dated 09-06-2021 by UPPCB.***
• *The unit shall take measures to stop discharge of spillage /*	• *Unit has sealed the leakage points for spillage runoff and there was no*

surface runoff containing waste water from industrial premises into drain (Ikra drain and drain coming from city along boundaries of sugar unit) and shall maintain water quality of the drain. • *The unit shall install the CPU for high-pressure boiler at earliest.* • *The unit shall install the Sewage Treatment Plant (STP) for sewage generated from colony at the earliest.* • *The unit shall convert the 4000 m3 capacity storage lagoon in to lined impermeable lagoon to avoid any possibility of leakages and must ensure the compliance of stored treated effluent w.r.t. notified discharge standards under E(P) Rules, 1986.* • *The unit shall dismantle the sump having capacity of 100 KL located in bio-compost yard of 10 acres.* • *Unnecessary lines for ETP feed near falling structure shall be dismantled immediately.* • *Abandoned old pumping station along with connected line shall be dismantled.* • *Filter backwashing tank of suitable design capacity shall be installed for filter backwashing. Existing fresh water line in ETP area shall be dismantled.* • *Provision shall be made for DM plant CIP reject shall be treated in ETP only*	*leakage found during inspection dated 09-06-2021.* • *Unit has installed CPU for high-pressure boiler and RO membrane (72 cubic meter per hour capacity).* • *Unit has installed STP of 220 KLD capacity for the treatment of sewage generated from sugar & distillery units.* • *Unit has submitted vide letter dated 19-06-2021 for conversation of storage lagoon of 4000 cubic meter in impermeable lagoon before the next crushing season.* • *Unit has also submitted vide letter dated 19-06-2021 that the dismantling of unused lines installed earlier, installation of filter back, washing tank and provision of treatment of reject of DM plant and CEP plant shall be done before next crushing season.*

The comparative chart of monitoring at different points on 02-02-2021 and 09-06-2021 is as below:

Sr. No.	***Monitoring Points Dated 02-02-2021***	***Monitoring Points Dated 09-06-2021***
1	*Old Lagoon (Capacity 4000 m3)* ***BOD-117 mg/litre***	*Old Lagoon (Capacity 4000 m3)* ***BOD-26 mg/litre***

2	*New Lagoon (Capacity 10000 m3)* ***BOD-187 mg/litre*** ***COD-370 mg/litre***	*New Lagoon (Capacity 10000 m3)* ***BOD-24 mg/litre*** ***COD-192 mg/litre***
3	*Ikara Drain at UP Stream of the unit* ***COD-296 mg/litre*** ***BOD-125 mg/litre*** ***TSS-146 mg/litre***	*Ikara Drain at UP Stream of the unit* ***COD-288 mg/litre*** ***BOD-120 mg/litre*** ***TSS-126 mg/litre***
4	*Ikara Drain at Down Stream of the Unit* ***COD-536 mg/litre*** ***BOD-296 mg/litre*** ***TSS-74 mg/litre***	*Ikara Drain at Down Stream of the Unit* ***COD-296 mg/litre*** ***BOD-130 mg/litre*** ***TSS-132 mg/litre***
5	*Drain near main gate of Sugar mill* ***COD-1604 mg/litre*** ***TSS-28 mg/litre*** ***TDS-508 mg/litre***	*Drain near main gate of Sugar mill* ***COD-208 mg/litre*** ***TSS-56 mg/litre*** ***TDS-418 mg/litre***
6	*STP is not installed.*	*STP is installed and operational.* ***Outlet parameter*** ***COD-40 mg/litre*** ***BOD-08mg/litre*** ***TSS-27 mg/litre***
7	*Local drain behind the spray pond overflow treatment system* ***COD-606 mg/litre*** ***BOD-342 mg/litre*** ***TSS-194 mg/litre***	*Local drain behind the spray pond overflow treatment system was found dry.*

Action Taken by UPPCB

Considering above facts UPPCB has issued following directions against the unit-

1. UPPCB has issued show cause notice vide letter number H61711/Jal-70/2021 dated 13-04-2021 under section 33A read with 27 (2) of Water (Prevention and Control of Pollution) Act 1974 as amended and also issued notice for imposition of Environmental Compensation of Rs. 30,000/- per day from 02-02-2021 till the date of compliance made by the unit. Copy of show-cause letter dated 13-04-2021 is Annexed as ***Annexure No.l.***

2- UPPCB vide letter number H62603/C-7/Jal-70/21 dated 22-06-2021 has imposed environmental compensation of Rs. 35,40,000/- against the unit. Annexed as ***Annexure No.2.***

M/s Dhampur Sugar Mills Ltd (Sugar Unit), Asmoli, Sambhal	
Date of Inspection	*13-01-2021*
Major Observations	*1- The unit was found operational with consented capacity of 9000 TCD and the ETP was operational at the time of inspection. On the day of inspection, the unit was producing only raw sugar for export purpose.* *2- As per Daily Manufacturing Reports (DMRs) and RT-TC from 1 Nov, 2020 to 12 Jan, 2021provided by the unit, average cane crushing is found 8501.36 TCD.* *3- Unit is having valid Consent to Operate under section 21/22 of the Air (Prevention & Control of Pollution) Act, 1981 (as amended) and Water under section 25/26 (Prevention & Control of Pollution) Act, 1974 (as amended) for discharge, both valid up to 31st December, 2021.* *4- The unit is also having valid Authorization under the provisions of Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 for storage and disposal of hazardous wastes valid up to 27th December, 2022.* *5- The NOC for ground water withdrawal is expired on 02.05.2019, however, the unit has applied the same from Ground Water Department, Uttar Pradesh on 30.11.2020.* *6- The unit has provided 2 stream of DM plant having capacity 30 m^3/hr & 50 m^3/hr for water treatment for boiler use. Both units consist of MGF, RO unit, degasser, cationic and anionic resin unit. Regeneration reject from DM plant along with spray pond overflow &IBD & CBD goes to spray pond treatment system for treatment. The unit had single UGR of capacity 540 m^3 for Hot and Cold-water recirculation system.* *7- The unit has provided separate physio-chemical treatment for spray pond overflow (Design capacity 60 m^3/hr.) which comprises of equalization tank, flash mixer, flocculator and lamella clarifier. Manual dosing of line observed*

	in the equalization tank. *8- Decanter is also installed but yet to commissioned for mechanical sludge handling. The unit has provided Proforma Invoice/ Purchase Order (P.O. No.-4100007358) dated 30.07.2020.* *9- Unit has provided OCEMS at outlet of ETP for continuous monitoring of treated effluent parameters and found connected with CPCB server. OCEMS reading w.r.t. flow-50.60 m^3/hr, pH7 .91 COD-77.2 mg/l, BOD-17.7 mg/1 and TSS-18.31 mg/l were recorded during inspection. The flow at outlet was 25 m^3/hr as measured by V-notch installed at outlet of channel.* *10- MLSS in AT-I and AT-II measured 3155 mg/l & 2708 ml/l respectively which indicate that both aeration tanks were in stabilized condition.* *11- MLVSS/MLSS ratio in AT-I and AT-II measured 0.87 & 0.86 respectively indicating that optimum active microbial consortium exists in both aeration tanks.* *12- The lagoon capacity of 16000 m^3 is adequate for 10-11 days, which is less than the 15 days of holding capacity of treated effluent storage during no demand of period for irrigation purpose. However, it is also mentioned in validation of ETP performance report performed by National Sugar Institute, Kanpur, submitted of 14.10.2020.* *13- Unit is in the process of installation of 36 m3/hr Condensate Polishing Unit (CPU) for condensate recycling.*
Conclusions	*1- The unit is operating with valid Consent to Operate Authorization.* *2- The unit has disposed huge quantity of scrap metal near ETP in open area in the unit premises.* *3- Partition wall of one sludge drying bed was in damaged condition.* *4- The unit has installed Decanter which is yet to be commissioned for sludge handling.* *5- Storage lagoon of final treated effluent with capacity of 16000 m3 is adequate for only 10-11 days which is less than maximum permissible storage of 15days.* *6- The unit is planning for installation of Condensate Polishing Unit (CPU) for condensate recycling.*

	7- Analysis result of sample collected from ETP outlet (pH-7.2 against 5.5-8.5, COD- 128 mg/l against 250mg 1.BOD-36 mg l against 100 mg.TSS-64 against 100 mg/I, TDS- 732 mg/l against 2100 mg 1. 0 & G-06 against I0 mg 1 and Lagoon outlet (pH-7.4 against 5.5-8.5, COD- 76 mg/l against 250 mg 1.BOD-11 mg 1 against 100 mg/l. TSS- 25 against 1 00 mg/l, TDS- 896 mg/1 against 2100 mg.1) are complying wr.t the discharge standards for land disposal. *8- The unit has not installed Sewage Treatment Plant (STP) for treatment of sewage generated from residential colony.* *9- Toe analysis of sample taken from sewage drain coming from residential area discharging into irrigation channel outside the unit premises and ponding in downstream of drain merging in Sot River indicates the characteristics of untreated domestic sewage.*
Compliance made by the unit w.r.t. recommendations of Joint Team.	
Recommendations	***Compliance verified on inspection dated 12-07-2021 by UPPCB.***
• *The unit shall provide suitable capacity dosing pump for dosing of chemicals like lime and polyelectrolyte solution for optimum utilization of chemical as per feed flow condition.* • *The unit shall safely dispose crap/metal.* • *The unit shall commission Decanter for better sludge management.* • *The unit shall repair partition wall sludge drying bed.* • *The unit shall install Condensate Polishing Unit CPU).* • *The unit shall install Sewage Treatment Plant (STP) for treatment of sewage generated from*	• *Complied.* • *Unit is disposing the metals scrap through authorised vender.* ***Complied***. • ***Complied***. • ***Complied***. • *Unit has installed Condensate Polishing Unit (CPU). Complied.* • *Unit has installed STP of 60 KLD capacity, which shall be operational very soon.*

residential colony as soon as possible. • *The unit shall restrict the drainage of domestic sewage into irrigation channel coming from residential area.* • *The unit shall obtain the NOC from Ground Water Department, Uttar Pradesh as soon as earliest.*	• *The drainage of domestic sewage shall be restricted after operation of the STP.* • *Unit has obtained registration from UP ground water department.*
Action Taken by UPPCB	
UPPCB has issued directions to the unit vide letter number H61712/Jal-59/2021 dated 13-04-2021 to comply with the recommendations/suggestions of the Joint Team. Copy of letter dated 13-04-2021 is Annexed as ***Annexure No.3***	

M/s Dhampur Sugar Mills Ltd. (Sugar Unit), Meerganj, Bareilly	
Date of Inspection	*14-02-2021*
Major Observations	*1- NOC issued by CGWA was valid up to 07.06.2020 for the abstraction of ground water from 04 tube wells of total quantity 743 m3/day (not exceeding 99,356 m3/year). The unit has applied for renewal of CGWA NOC dated 28.04.2020. Apart from 04 permitted borewells, one additional bore-well was observed near residential colony of the unit, which is violation of CGWA NOC conditions, however the unit has provided the photographic evidence of this dismantled borewell.* *2- The unit is engaged in production of sugar with consented capacity of 5000 TCD using sugarcane. On the day of inspection, the unit was found operational. The unit started cane crushing on 3rd November, 2020. On the date of 13.01.2021, the sugar plant was operated at 5350 TCD. The ETP was reported to be operational from 27.09.2020.* *3- The earlier reported bypass of untreated effluent through a pipeline laid underground up to Peelakhar river in Sindholi Village, found removed and a slope joining Peelakhar river also found*

	dry during the inspection. *4- Previously, the unit had two lagoons of 5000 m3 and 2200 m3 capacity for storage of final treated effluent. However, during joint inspection, it was found that, the unit has kept only one lagoon of 5000 m3 capacity for storage of final treated effluent and the second lagoon of 2200 m3 capacity converted into aeration tank for spray pond overflow treatment.* *5- The lagoon capacity of 5000 m3 is adequate for only 6-7 days, which is less than the maximum permissible storage of 15. However, it is also mentioned in validation of ETP performance report performed by National Sugar Institute, Kanpur in the month of March, 2020.* *6- Treated effluent as claimed by unit was being provide to farmers via fixed HDPE pipeline but unit was not able to make the line operational and no flow was observed at the point of treated effluent supply to farm land. After about 3-4 hours, the flow was observed at the point in farmland in the HDPE line from where sample was collected. This indicates that unit is not providing regularly for irrigation via HDPE pipeline. Sample analysis also shows high BOD (122 mg/1) and COD (196 mg/1) indicates no supply of treated effluent for irrigation regularly.* *7- To treat the domestic wastewater generated from this colony, the unit has installed 50 KLD Sewage Treatment Plant (STP) and laying of the pipeline connection was under progress. STP was not operational at the time of inspection.* *8- Ponding of untreated sewage observed besides the boundary wall of the sugar mill.*
Compliance made by the unit w r.t. recommendations of Joint Team.	
Recommendations	***Compliance verified on inspection dated 21-01-2021 and 01-07-2021 by UPPCB.***
• ETP inlet flowmeter should be installed at the main inlet of ETP.	*• Unit has installed ETP inlet flow meter.*

• *Periodic removal of sludge shall be ensured.*	• *Complied.*
• *Flow meter shall be installed at mill house and boiling house outlet for monitoring of generated effluent.*	• *Complied.*
• *The oil skimmer shall be installed within a tank having approximate retention time of 45 min.*	• *Unit has submitted that the compliance shall be made before the next crushing season.*
• *The treated effluent discharges for irrigation shall comply with MOEFF&CC Notification dated 14.01.2016 (G.S.R. (35E)) for land disposal.*	• *Complied.*
• *Installed STP shall be made operational for treatment of generated sewage. Treated sewage shall be utilized for irrigation & other purposes.*	• *The sample collected from the outlet of STP by UPPCB on 21-01-2021 and 01-07-2021 were found to be complying.*
• *The unit shall keep only single arrangement to pump the treated effluent from the lagoon to irrigation supply.*	• *Unit has submitted that the compliance shall be made before the next crushing seasons.*
• *Unit shall obtain amended Hazardous waste authorization from UPPCB to handle and safe disposal of discarded containers, oily rags, cotton waste, O&G and spray pond ETP sludge.*	• *Unit has applied for amended authorisation on 19-07-2021 which is under process.* • *Unit has obtained NOC from UP Ground Water Authority for abstraction of ground water, valid till 18-05-2026.*
Action Taken by UPPCB	
Considering above facts UPPCB has issued following directions against the unit- *1- Third Party NSI Kanpur authorized by CPCB has inspected the unit on 28-01-2021, during inspection the unit was found complying w.r.t. discharge norms and the various units of*	

treatment plants were considered adequate. *2- UPPCB has issued show cause notice vide letter number H61710/Ja1-773/2021 dated 13-04-2021 under section 33A read with 27 (2) of Water (Prevention and Control of Pollution) Act 1974 as amended and issued notice for imposition of Environmental Compensation of Rs. 30,000/- per day from 14-01-2021 till the date of compliance made by the unit. Copy of letter dated 13-04-2021 is Annexed as* ***Annexure No.4.***

M/s Dhampur Sugar Mills Ltd (Distillery Unit), Dhampur Bijnor	
Date of Inspection	*02-02-2021*
Major Observations	*1- The Unit has installed mass flow meters with totalizer at inlet and outlet of SMEE, IMEE and at incineration boiler feed. All mass flow meters are connected to CPCB server. At the time of inspection, the reading of mass flow meters (totalizer and flow rate) were noted and are as follows:* *a. Reading of mass flow meter (totalizer and flow rate) at IMEE;* *i. At inlet of IMEE: totalizer reading-527719 T, flow rate-52.2 T/hr (49.24 m?/hr, considering Sp.Gr.1.06)* *ii. At outlet of IMEE (IMEE Concentrate): totalizer reading-151864 T, flow rate- 13.56 T/hr (11.69 m?/hr, considering Sp.Gr.1.16)* *b. Reading of mass flow meter (totalizer and flow rate) at SMEE;* *i. At inlet of SMEE: totalizer reading-1693558 T, flow rate-54.8 T/hr (51.69 m3/hr, considering Sp.Gr.1.06)* *ii. At outlet of SMEE (SMEE Concentrate): totalizer reading-371896 T, flow rate- 12.20 T/hr (10.52 m?/hr, considering Sp.Gr.1.16)* *c. Reading of mass flow meter (totalizer and flow rate) at Incineration boiler;* *i. At inlet of incineration boiler:*

	totalizer reading-587 T, Slop (Concentrate) flow rate-26 T/hr (20.15 m?/hr, considering Sp.Gr.1.29) *2- In CPU, the unit has installed flow meter at RO-Feed, RO-Permeate and RO-Reject, at the time of inspection flow meter totalizer reading were found 66827 .5 m3 (flow rate: 116.5. m3/hr), 61918.3 m3 (flow rate: 71 m3/hr) and 3072.2 m3 (flow rate: 39 m3/hr) respectively.* *3- Previously, the unit had opted bio-composting as well as incineration boiler for achieving Zero Liquid Discharge (ZLD), however as informed by the unit representative that the process of bio-composting has been discontinued from June-2020 and presently the unit has opted for concentration incineration system. During joint inspection, the bio-composting operation was found not in operation.* *4- Presently, in 10 acres of active bio-compost yard, the unit is mixing boiler ash coming from distillery & sugar plant with press mud and after mixing, the prepared mixture is distributed to the farmers at free of cost through open trolleys.* *5- As per the submitted purchase order, STP will be comprising of bar screen, equalization tank, oil & grease trap, chemical dosing system, tube settler, aeration tank, multi grade sand filter, activated carbon filter, chlorine dosing system and treated water storage tank.* *6- Analysis of effluent samples collected from inlet of Condensate Polishing Unit shows pH- 4.2, COD - 4120 mg/1 and BOD-1933 mg/1, TDS-1096 mg/1 and colour-12 Hazen. Sample collected from the outlet of CPU permeate shows pH- 5.2, COD - 1272 mg/l and BOD-833 mg/1, TDS-156 mg/l and colour-BDL.* *7- Analysis of samples collected from the inlet of SMEE and IMEE (common) shows pH4.8, COD - 92000 mg/1 and BOD-29500 mg/l and TS- 126448 mg/1 (12%). Sample collected from the outlet of SMEE and IMEE shows pH- 4.6, COD - 467200 mg/1 and BOD-142000 mg/l, TS-425784 mg/1 (42%) and pH- 4.7, COD - 614400 mg/1 and BOD-208000 mg/1, TS-640892 mg/1 (64%).* *8- Concentrated spent wash (slop) collected from the feed line of the boiler*

	shows pH4.6, COD - 550400 mg/1 and BOD-200000 mg/1 and TS- 495472 mg/1 (49%).
Compliance made by the unit w r.t. recommendations of Joint Team.	
Recommendations	***Compliance verified on inspection dated 09.06.2021 by UPPCB.***
• The unit has total 03 nos. of tube wells against 02 nos. of permitted tube wells as per CGWA NOC. The unit shall dismantle the 3"1 no. of non-operational tube well.	*• Unit has dismantled 03rd tubewell.* ***Complied.***
• The unit shall obtain hazardous waste authorization from the respective state pollution control board.	*• The unit has obtained authorization for disposal of Hazardous Waste vide letter dated 16-05-2021 of UPPCB valid till 16-05-2026.* ***Annexure No. 5***
• The unit shall complete the construction work of STP at the earliest and shall treat the sewage generating from the residential colony as well as industrial plants in STP only.	*• Unit has installed STP of 220 KLD which was found operational during inspection dated 09-06-2021.* ***Complied.***
• The unit shall ensure complete filling of both the lagoons of capacity 6159.60 KL and 10,173 KL with ash.	*• Unit has completed the work of filling of both the lagoons of capacity 6159.60 KL and 10,173 KL with ash.* ***Complied.***
• If the concerned state pollution control board allows the unit to carry out temporary bio-composting for utilization of bio-methanated sludge, in that case the unit shall comply with the following;	
• The unit shall ensure to consume the bio-methanated spent wash in bio-composting before monsoon season.	• ***Complied***

• *After completion of the temporary bio-composting, the unit shall completely dismantle the pump sump of MEE concentrate, which is located at bio-compost yard of 10 acres.*	• ***Complied***
• *After completion of the temporary bio-composting, the unit shall completely dismantle the newly built pipeline.*	• ***Complied***
Action Taken by UPPCB	
• *CPCB inspected the Ikra drain on 02-11-2020, during the monitoring of upstream and downstream of the unit it was found that the wate quality of the drain is effected by the polluted discharge by the unit.* • *Considering above UPPCB vide letter number H57268/C-7/Ja1-105/2021 dated 12-01¬2021 has issued show cause notice under section 33A of Water (Prevention and Control of Pollution) Act, 1974 to the unit for closure and also issued notice for imposition of environmental composition of Rs. 30,000/- per day from 02-11-2020 till the compliance made by the unit.* ***Annexure no. 6.*** • *UPPCB vide letter number H63682/C-7/Ja1-105/Aaswani/21 dated 20-07-2021 has imposed environmental compensation of Rs. 65,70,000/- against the unit.* ***Annexure no. 7.***	

Additional written submissions by CPCB

56. In addition to its reply dated 26.03.2021, CPCB has further filed its written submission dated 30.07.2021 which is as follows;

> *"In the above mentioned O.A. No. 539/2019 further action has been taken that UP Pollution Control Board has filed complaint case number 3306 of 2021 on 27-07-2021 against M/s Dhampur Sugar Mills Ltd., (Sugar Unit) Dhampur Bijnor under section-43 of the Water (Prevention & Control of Pollution) Act, 1974 in the Court of Special Judicial Magistrate (Water & Air Pollution Control), Lucknnow."*

Written submissions by Resp. no. 1 to 3.

57. Respondent no. 1 to 3 have filed their Written Submissions on 04.08.2021. Respondent no. 1 to 3 at the very outset have submitted

that they deny each and every statement, averments and allegations contained in the Original Application filed by the Applicant. It is submitted that the applicant has filed the present Original Application being O.A. No.539 of 2019 against the four units of the said M/s Dhampur Sugar Mills Ltd., namely, M/s Dhampur Sugar Mills, Asmoli (Sugar Unit), M/s Dhampur Sugar Mills, (Sugar Unit and Distillery Unit), Dhampur and M/s Dhampur Sugar Mills, Meerganj which are arrayed-as Respondent No.1, Respondent No.2 and Respondent No.3 respectively in the present Original Application.

58. It is next submitted that the Applicant in the present Original Application has, alleged that the answering Respondents are not complying with the environmental norms referring to the final Judgment dated 10-12-2015 passed by this Tribunal in Original Application No.35 of 2015 titled as "Shailesh Singh vs. M/s D.S.M. Sugar Distillery Division Asmoli & Ors." and the directions of the CPCB vide Letter dated 23-04-2019 (Dhampur Sugar Unit), Letter dated 2005-2019 (Asmoli Sugar Unit) and Show Cause Notice dated 14-06-2019 (Meerganj Sugar Unit).

59. It is further submitted that this Tribunal, vide Order dated 27.06.2019, admitted the present Original Application and further directed to issue notice to the Respondents by registered post /acknowledgement due and dasti as well. It is submitted that however, no notice was ever served upon the answering Respondents and the answering Respondents came to know about the present Original Application from their counsel. It is further submitted that during the whole proceedings in the present Original Application before this Tribunal, no opportunity of hearing was ever provided to the Respondents no. 1 to 3.

60. It is further submitted by the respondents no. 1 to 3 that this Tribunal, during the proceedings in the present Original Application being O.A. No.539 of 2019, has directed for the inspection of the answering Respondents through the Joint Inspection Team consisting of the officials of the Respondent No.7 i.e. Central Pollution Control Board (CPCB) and the Respondent No.8 i.e. Uttar Pradesh Pollution Control Board (UPPCB) and in compliance to the directions issued by this Tribunal, the Joint Inspection Team has conducted several inspections of the answering Respondents and various directions were issued time to time by the Joint Inspection Team during the said inspections. The Respondent No.7 i.e. Central Pollution Control Board (CPCB) has filed several Compliance Reports before this Tribunal and the Respondent No.8 i.e. Uttar Pradesh Pollution Control Board (UPPCB) has also filed several Action Taken Reports before this Tribunal.

61. It is submitted that a perusal of the Compliance Reports filed by the Respondent No.7 i.e. Central Pollution Control Board (CPCB) and the Action Taken Reports filed by the Respondent No.8 i.e. Uttar Pradesh Pollution Control Board (UPPCB) clearly shows that the answering Respondents are complying with the directions / recommendations issued by the Joint Inspection Team. However, because of some discrepancies noticed by the Joint Inspection Team during the said inspections of the answering Respondents, the Respondent No.7 i.e. Central Pollution Control Board (CPCB) and the Respondent No.8 i.e. Uttar Pradesh Pollution Control Board (UPPCB) have levied the Environmental Compensation on the Respondents no. 1 to 3.

62. It is next submitted that in compliance with the directions issued by this Tribunal, the latest inspection of the answering Respondents was conducted by the Joint Inspection Team on the following dates:

S.No	Name of the Unit	Date of Joint Inspection
1.	M/s Dhampur Sugar Mills Ltd. (Sugar Unit), Asmoli, Sambhal, U.P.	13.01.2021
2.	M/s Dhampur Sugar Mills Ltd. (Sugar Unit), Meerganj, Bareilly, U.P.	14.01.2021
3.	M/s Dhampur Sugar Mills Ltd. (Distillery Unit), Dhampur, Bijnor, U.P.	02.02.2021
4.	M/s Dhampur Sugar Mills Ltd. (Sugar Unit), Dhampur, Bijnor, U.P.	03.02.2021

63. It is further submitted that the Respondent No.8 i.e. Uttar Pradesh Pollution Control Board (UPPCB) has filed an Action Taken Report before this Tribunal with respect to the aforesaid Joint Inspections of the answering Respondents. The Joint Inspection Team has issued several recommendations with respect to the aforesaid latest Joint Inspections of the answering Respondents.

64. It is further submitted that the answering Respondents have complied with the said recommendations issued by the Joint Inspection Team with respect to the aforesaid latest Joint Inspections of the answering Respondents. On 22.07.2021, the Respondent No.8 i.e. Uttar Pradesh Pollution Control Board (UPPCB) has filed a Response to I.A. No.376/2020 in O.A. No.539/2019 and the said Response contains the Compliance Status with respect to the said recommendations as verified by the Respondent No.8 i.e. Uttar Pradesh Pollution Control Board (UPPCB). The relevant contents of the said response are as under:

Dhampur Sugar Mills Limited (Sugar Unit), Asmoli, Sambhal (the Respondent No.1 herein):

Recommendations	Compliance verified on Inspection dated 12-07- 2021 by UPPCB	Status as per the answering Respondent
• The Unit shall provide suitable capacity dosing pump for dosing of chemicals like lime and polyelectrolyte solution for optimum utilization of chemical as per feed flow condition.	• Complied.	• Complied
• The Unit shall safely dispose scrap /metal.	• Unit is disposing the metals scrap through authorized vendor. Complied.	• Complied
• The unit shall commission Decanter for better sludge Management	• Complied.	• Complied
• The Unit shall repair partition wall sludge drying bed.	• Complied.	• After installation of Decanter, sludge bed not required. Damaged sludge bed has been removed
• The Unit shall install the Condensate Polishing Unit (CPU)	• Unit has installed the Condensate Polishing Unit (CPU). Complied	• Complied
• The Unit shall install the Sewage Treatment Plant (STP) for treatment of sewage generated from residential colony as soon as possible.	• Unit has installed STP of 60 KLD capacity, which shall be operational very soon.	• **Complied, delayed due to COVID. Shall be operational soon**
• The Unit shall restrict the drainage of domestic sewage into irrigation channel coming from residential area.	• . The drainage of domestic sewage shall be restricted after operation of the STP.	• Complied
• The Unit shall obtain the NOC from Ground Water Department, Uttar Pradesh as soon as earliest.	• Unit has obtained registration from UP ground water department.	• Complied. Unit has obtained NOC valid till 28-06-2026 for all the three tube-wells from UP Ground Water Authority

Copy of NOC issued by the Ground Water Department, Ministry of Jal Shakti (U.P.) (valid till 28-06-2026) bearing Registration Nos. 202104000082, 202104000085 & 202104000117 for the Sugar Unit, **Asmoli** has also been placed on record.

"(ii) <u>Dhampur Sugar Mills Limited (Sugar & Distillery Unit), Dhampur, Bijnor (the Respondent No.2 herein):</u>

Recommendations	Compliance verified on Inspection dated 09-06.2021 by UPPCB	Status as per the answering Respondent
• The Unit shall take measures to stop discharge of spillage /surface runoff containing waste water from industrial premises into drain (Ikra drain and drain coming from city along boundaries of Sugar Unit) and shall maintain water quality of the drain.	• Unit has sealed the leakage points for spillage runoff and there was no leakage found during inspection dated 09-06-2021.	• Complied
• The Unit shall install the CPU for high pressure boiler at earliest.	• Unit has installed CPU for high pressure boiler and RO membrane (72 cubic meter per hour capacity).	• Complied. Confirmed as per Inspection dated 09-06-2021
• The Unit shall install the Sewage Treatment Plant (STP) for sewage generated from colony at the earliest.	• Unit has installed STP of 220 KLD capacity for the treatment of sewage generated from sugar & distillery units.	• Complied. Confirmed as per Inspection dated 09-06-2021
• The Unit shall convert the 4000 m3 capacity storage lagoon in to lined impermeable lagoon to avoid any possibility of leakages and must ensure the compliance of stored treated effluent w.r.t. notified discharge standards under EP	• Unit has submitted vide letter dated 19.06.2021 for conversation of storage lagoon of 4000 cubic meter in impermeable lagoon before the next crushing season.	• **Job to be completed before the start of the next crushing season**

Rules,1986.		
• The Unit shall dismantle the sump having capacity of 100KL located in bio-compost yard of 10 acers.	• Unit has also submitted vide letter dated 19-06¬2021 that the dismantling of unused lines installed earlier, installation of filter back, washing tank and provision of treatment of reject of DM plant and CEP plant shall be done before next crushing season.	• Complied
• Unnecessary lines of ETP feed near falling structure shall be dismantled immediately.		• Complied. All unnecessary lines have been dismantled
• Abandoned old pumping station along with connect-ing line shall be dismantled.		• Complied. Old pumping station and connection lines have been dismantled
• Filter back washing tank of suitable design capacity shall be installed for filter backwashing. Existing freshwater line in ETP area shall be dismantled.		• Complied. Filter back washing tank to be operational in the next crushing season
• Provision shall be made for DM plant CIP reject shall be treated in ETP only.		• **DM plant CIP reject arrange-ment will be operative before the next crushing season**

65. Copy of CGWA NOC for Ground Water Extraction valid till 26-04-2022 and the Certificates of Registration issued by the Ground Water Department, Ministry of Jal Shakti (U.P.) bearing Registration Nos. 202104000201, 202104000202, 202104000203 & 202104000204 for the Sugar Unit, Dhampur has also been placed on record.

Distillery

Recommendations	**Compliance verified on Inspection dated 09-06.2021 by UPPCB**	**Status as per the answering Respondent**

• The Unit has total 03 nos. of tube wells against 02nos. of permitted tube wells as per CGWA NOC. The Unit shall dismantle the 3rd no. of non-operational tube well.	• Unit has dismantled 03rd tube-well. Complied.	• Complied
• The Unit shall obtain hazardous waste authorization from the respective State Pollution Control Board.	• The unit has obtained authorization for disposal of Hazardous Waste vide letter dated 16-05-2021 of UPPCB valid till 16-05-2026.	• Complied.
• The Unit shall complete the construction work of STP at the earliest and shall treat the sewage generating from the residential colony as well as industrial plants in STP only.	• Unit has installed STP of 200 KLD which was found operational during inspection dated 09-06-2021. Complied	• Complied.
• The Unit shall ensure complete filling of both the lagoons of capacity 6159.60 KL and 10,173 with ash.	• Unit has completed the work of filing of both the lagoons of capacity 6159.60 KL and 10,173 with ash. Complied	• Complied.
• If the concerned State Pollution Control Board allows the unit to carry out temporary bio-composting for utilization of bio methanated sludge, in that case the Unit shall comply with the following. • The unit shall ensure to consume the Bio- methanated spent wash in bio- composting	• Complied.	• Complied.

before monsoon season.		
• After completion of the temporary bio-composting, the unit shall completely dismantle the pump sump of MEE concentrate, which is located at bio-compost yard of 10 acres.	• Complied.	• Complied.
• After completion of temporary bio-composting, the unit shall completely dismantle the newly built pipeline.	• Complied.	• Complied.

Copy of CGWA NOC for Ground Water Extraction valid till 06-042022 and the Certificate of Registration issued by the Ground Water Department, Ministry of Jal Shakti (U.P.) bearing Registration Nos. 202104000250 & 202104000251 for the Distillery Unit, Dhampur has also been filed on record.

(iii) M/s Dhampur Sugar Mills Ltd. (Sugar Unit), Meerganj, Bareilly, UP (the Respondent No.2 herein)

Recommendations	**Compliance verified on Inspection dated 21.01.2021 and 01.07.2021 by UPPCB**		**Status as per the answering Respondent**
• ETP inlet flow meter should be installed at the main inlet of ETP.	• Unit has installed ETP inlet flow meter.	•	• Complied
• Periodic removal of sludge shall be	• Complied.	•	• Complied

ensured.			
• Flow meter shall be installed at Mill house and boiling house outlet for monitoring of generated effluent.	• Complied.	•	• Complied
• The Oil Skimmer shall be installed within a tank havingapproximate retention time, of 45 minute.	• Unit has submitted that the compliance shall be made before the next crushing season.	•	• Complied. A new Oil Skimmer has been installed
• The treated effluent discharges for irrigation shall comply with MOEF&CC Notification dated 14.01.2016 (G.S.R. (35E)) for land disposal.	• Complied.	•	• Complied
• The installed STP shall be made operational for treatment of generated sewage. Treated sewage shall be utilised for irrigation and other purposes.	• . The sample collected from the outlet of STP by UPPCB on 21-01-2021 and 01-07-2021 were found to be complying.	•	• Complied
• The Unit shall keep only single arrangement to pump the treated effluent from lagoon to irrigation supply.	• Unit has submitted that the compliance shall be made before the next crushing season.	•	• Complied. Single arrangement for pumping the treated effluent from the lagoon has already been made.
• The Unit shall obtain amended Hazardous waste authorisation from UPPCB to handle and safe disposal of discarded containers, oily rags, cotton waste, O&G and spray pond ETP sludge	• Unit has applied for amended authorisation on 19-07-2021 which is under process	•	• Complied. Applied for the amended authorization

Copy of NOC issued by the Ground Water Department, Ministry of Jal Shakti (U.P.) (Valid till 1805-2026) bearing Application Serial Nos. BRLY0421NIN0027, BRLY0421NIN0028, BRLY0421NIN0029 &

BRLY0421NIN0030 for the Sugar Unit, Meerganj has also been placed on record.

66. It is further submitted that the aforesaid facts show that the Respondents have already complied with the directions made by the Joint Inspection Team during the aforesaid latest Joint Inspections of the Respondent units. **Though some of the recommendations complied can become operative only during the cane crushing season.**

67. It is next submitted that as far as the subject matter of the Original Application No.35 of 2015 titled as *"Shailesh Singh vs. M/s D.S.M. Sugar Distillery Division Asmoli & Ors."* is concerned, it is submitted that this Tribunal, vide Order dated 23-04-2015, has provided liberty to the Sugar and Distillery units of the DSM Sugar, Asmoli at Asmoli, District — Sambhal (U.P.) [arrayed as Respondent No.2 in the present Original Application] to take remedial measures and thereafter to apply to the Joint Inspection Team for a fresh inspection of the said Sugar and Distillery units. This Tribunal, vide the said Order dated 23-04-2015, has provided further liberty to the said Sugar and Distillery units to move this Tribunal for seeking permission to operate after achievement of the prescribed standards in respect of its effluents as per the prescribed norms and carrying out rectification of the various defects and deficiencies pointed out in the inspection.

68. It is further stated that the said Sugar and Distillery units, after rectification of the various defects and deficiencies pointed out in the inspection and as directed by this Tribunal vide the aforesaid Order dated 23.04.2015, filed a Review Application being Review Application No.13 of 2015 in the said Original Application No.35 of 2015. This Tribunal, vide

order dated 10-12-2015, disposed off the said Review Application No.13 of 2015 filed by the said Sugar and Distillery units.

69. It is next submitted that a perusal of the said Judgment dated 10.12.2015 passed by this Tribunal shows that while allowing the said Sugar and Distillery units to start its operation, this Tribunal has observed that the said Sugar and Distillery units has complied with the major recommendations of the Joint Inspection Team and said Sugar and Distillery units herein becomes a compliant unit.

70. It is further submitted that, however, this Tribunal, vide the said Judgment dated 10.12.2015, has imposed an Environmental Compensation of Rs.1 Crore and further directed to furnish a Bank Guarantee of Rs.10 Lakhs. That on 07-01.2016 the said DSM Distillery Division, Asmoli has duly deposited the said Environmental Compensation of Rs.1 Crore as well as furnished the said Bank Guarantee of Rs.10 Lakhs as directed by this Tribunal.

71. In the facts and circumstances as stated above, it has prayed for dismissal of the present Original Application being Original Application No.539 of 2019 titled as *"**Adil Ansari vs. M/s Dhampur Sugar Mills Ltd. & Ors.**"* filed by the Applicant.

Analysis of the submissions:

72. We have considered the rival submissions. The present matter is a classic example of total indifference, lack of concern and sensitivity by respondent no. 1 to 3 towards compliance of environmental laws. Persistent non-compliance, defiance of directions of CPCB and apathy towards the ecosystem has been the attitude of all the four units. It will

not be an exaggeration to state that respondent units while working have ignored, disregarded and given a good bye to all established principles of sustainable development. In short, it is a matter which shows self-concern rather than concern for others. The respondents have run the industry as per their own will showing total indifference for established rules, regulations and norms. Each and every inspection of the Units has only shown deficiencies and shortcomings regarding compliance of environmental laws. Though this case is pending since the year 2019 but it has earlier history of litigation of non-compliance of the year 2015 when an OA No. 35/2015 was filed against one of the units of the respondent no.1 to 3 and directions were issued for closure of the same vide order dated 23.04.2015. However, the matter was reviewed on 10.12.2015 and unit was allowed to operate with the direction that it will comply with the discrepancies pointed by Joint Inspection Team and Unit was also held liable to pay environmental compensation of Rs. 1 Crore within one month to UPPCB and furnish a Bank Guarantee of Rs. 10 lakhs.

73. So far as role of CPCB & UPPCB is concerned, it also no doubt shows failure on their part to act and do their statutory duty and take action when gross violations were observed by them. Their latitude, soft corner and a meek approach in taking prompt action when it was immediately required speaks a lot about their working.

74. The functioning of respondent no.1 to 3, as will be highlighted in the coming paras will reveal that Units have never shown any concern towards environmental norms and thereby they have violated the fundamental rights of others. The respondent Units have forgotten the concept that protection and cleaning of environment was the essence of

'*Vedic Culture'*. Nature had a special place of respect in the ancient texts. They attached great attachment to protection and purity of environment. They persisted on safeguarding the habitation and firmly believed in the principle of non-pollution. The man was taught to live in harmony with nature and to recognize the fact that diversity prevails in all elements. Our ancestors treated nature holistically giving utmost reverence to preserving its various entities and elements.

75. **"माता भूमि पुत्रोहं पृथिव्या"**

"Earth is my mother and I am her Son"

The above Sanskrit Shloka clearly indicates the relationship of humans with Earth which is like a mother and child inferring that one should not harm either the environment or its flora and fauna.

76. The Hon'ble Supreme Court in number of its judgments has also emphasized the need for a clean environment and has held that Article 21 of the Constitution includes the right to enjoyment of pollution free water and air for full enjoyment of life. In **Subhash Kumar vs. State of Bihar, 1991 AIR 420,** the Hon'ble Apex Court has held that right to life is a fundamental right under Article 21 of the Constitution and it includes the right of enjoyment of pollution free water and air for full enjoyment of life.

77. In "**T. Damodhar Rao And Ors. vs The Special Officer, Municipal, AIR 1987 AP 171**, the High Court of Andhra Pradesh has held that the slow poisoning by the polluted atmosphere caused by environmental pollution and spoliation should also be regarded as amounting to violation of Article 21 of Indian Constitution.

78. With the above background let us proceed to analyze the submissions made by the parties and various reports showing violations by respondent units of environmental norms.

79. The first **OA No. 35/2015** was filed by one Mr. Shailesh Singh against DSM Sugar Distillery Division and Ors. and order dated 23rd April, 2015 speaks a lot about the working of Distillery at the said time. The said order runs as follows:-

	Date and Remarks	**Orders of the Tribunal**
	Item No. 12 **April 23, 2015.** SS	We have heard the Learned Counsel appearing for parties. The report of the Joint Inspection Team has been filed on record. In terms of this report the DSM Sugar Distillery Division unit is not adhering to the prescribed norms. The sample collected and analysed by the Joint Inspection Team is beyond the prescribed limits for different parameters. It is further stated that treated effluent from ETP is not meeting the criteria for the BOD and TSS for disposal on land. The treated effluent storage tank with capacity of 24000 KL was damaged. Furthermore, there was short circuiting at the primary clarifier Unit. DG set was not equipped with acoustic enclosure. The Learned Counsel appearing for the industries submits that they will be conducting effective steps in terms of the recommendation made. Further the Applicant contended that the Groundwater has been polluted to the extent that the population of the nearby localities is suffering from Cancer and some other diseases. It is their contention that there is serious air pollution. Allegations made by the Applicant are of course denied

		by the industry respondents. In the circumstances afore-stated we direct that this industry shall be closed forthwith. However, industry has liberty to take remedial measures and apply to the Joint Inspection Team for a fresh inspection. The inspection would be conducted by the Joint Inspection Team only in furtherance to the order of the Tribunal. Recommendation of the Joint Inspection Team then would be placed before the Tribunal. Liberty to the Respondent industry to move the Tribunal for seeking permission to operate after achievement of the prescribed standards in respect of its effluent as per the prescribed norms and carrying out rectification of various defects and deficiencies pointed out in the inspection. Both Sugar and Distillery units will remain closed. With the above directions the Original Application No. 35 of 2014 as well as all other M.A. No. 348 of 2015 and M.A. No. 349 of 2015 are disposed of. Liberty to Applicant to move as prayed.

80. Perusal of the above order reveals that as per the joint inspection team report, the sample collected and analyzed was far beyond the prescribed limits for different parameters. After examining the report, this Tribunal had ordered for closure of unit forthwith. However, thereafter a review application was filed and the Tribunal had passed the following order on 23.04.2015:-

> "Thus, we have to apply the above principals while directing the industry to pay environment compensation in terms of Section 15 and 17 of the National Tribunal Act, 2010. In view of our discussion, we pass the following order:-

1) "The Industry is permitted to start its manufacturing activity.

2) Before commencing its sugar manufacturing and distillery it must comply with the discrepancies pointed out by the Joint Inspection Team.

3) 3) The Unit will be inspected by the Joint Inspection Team immediately upon commencement gets operative.

4) The industry is held to be liable pay the Environmental Compensation of Rs. 1 Crore within one month to UPPCB and furnish a bank guarantee as well to the extent of Rs. 10 lakh.

5) The amount of Rupees One Crore paid to the UPPCB shall be spent upon taking preventive measures, removing of the various pollutants lying in the area, as well as steps for restoring of the environment and ecology as per the records of this file and ensure that no sludge spent wash, fly-ash or other pollutants generated by this industry is permitted to remain in the soil, ground water and even on the land of the industry.

6) If the unit performs strictly within the prescribed parameters and as per the conditions imposed and is found to be compliant and non-polluting industry, the bank guarantee could be released after a period of two years, failing which the bank guarantee shall be encashed and the amount utilized for prevention and control of pollution in that area."

81. Even after the above order, the respondents had not bothered to comply with the environmental norms and, therefore, the present OA no. 539/2019 was filed by the applicant alleging that respondent Units are still polluting the surrounding area and directly impacting the health of the villagers. Perusal of record reveals that notices under Section 5 of the Environment (Protection) Act were issued against the industry in the year 2018 as well as 2019. The record further reveals that a notice under Section 5 of the Environment Protection Act was issued against M/s.

Dhampur Sugar Mills Ltd., Village Asmoli, Distt. Sambhal on 20th May, 2019 categorically mentioning that inspection was carried out on 18th March, 2019 and the samples show that Mill has installed the flow meters but not maintained the log book of hot and cold water and effluent generation. It further shows that mill was advised to install flow meter at power turbine and process cooling tower make-up. It was further directed that log book should be maintained regarding consumption at various points as sugar plant, cogeneration and residential. It was further observed that Unit should install CPU for treatment of condensate to ensure its reuse and recycle within the process.

82. Similarly, a notice u/s. 5 of the Environment (Protection) Act was issued against M/s. Dhampur Sugar Mills Ltd. Dhampur, Distt. Bijnor i.e. a Distillery Division on 06.02.2018. The report shows that an environmental compensation of Rs. 46,80,000/- was imposed upon the Unit for non-compliance for the period dated 11.11.2018 to 15.04.2019 for crushing season 2018-19. The said notice also contemplated that Unit shall close down its Sugar manufacturing operations with immediate effect and it shall also dismantle the bypass arrangements and stop discharge of untreated/ partially treated effluent discharge immediately. The Unit shall also install flow meters at Mill, fibrizer, power turbine cooling, B and C massecuite cooling, and outlet of R.O. water reject. The unit shall install condensate polishing unit for high pressure boilers, 105 kg/cm2. The unit shall install adequate Multi grade filter and Activated carbon filter. The unit shall install mechanical sludge handling system of adequate capacity.

83. The record further shows that a notice dated 15.03.2018 u/s. 5 of the Environmental Act was issued to M/s. Dhampur Sugar Mills, (DSM) Ltd., Sidhauli Road, Meerganj, Bareilly (U.P.) (Sugar Division) observing

that inspection was carried out on 28th March, 2019 and analysis of treatment effluent sample from lagoon showed pH-7.52 against the norms of 5.5-8.5, BOD-BDL mg/l against norms of 100 mg/l, COD 8 mg/l against norms of 250 mg/l, TDS- 465 mg/l against norms of 2100 mg/l and TSS- 54.4 mg/l against norms of 100 mg/l. BOD level was below detection limit at different treatment operations. It was observed that unit has diluted ETP system at different stages. Though, it was reported by unit representative that the boiler ash and press mud are provided to local farmers for blending in their agricultural field/ land filling but the unit was unable to provide any documentary evidence regarding the same. The flow observed at the ETP outlet was equal to that at the ETP inlet even though the spray pond treated effluent was also being discharged into the ETP. It was, thus, evident that aeration tank to ETP system was not properly stabilized. Due to poor operation and maintenance of ETP system there was possibility of dilution of ETP system. A show-cause notice was, thus, issued to the Unit as to why it should not be closed down until all the necessary pollution control measures are planned and implemented.

84. According to the applicant, the said Unit has not complied with environmental norms and is violating the fundamental rights of the villagers. It was also submitted that because of non-adherence to environmental norms, the entire area is facing problem of contaminated water and toxic effluent is being directly discharged into drain which ultimately goes to River and discharge of effluent in the land is also affecting the soil and, therefore, he has filed the present Original Application OA no. 539/2019. The order dated 14th August, 2019 of the Tribunal sums up the grievance of the applicant. It runs as follows:-

> **"1.** Grievance in this application is that M/s Dhampur Sugar Mills Ltd. (Sugar Division), District Sambhal and sugar mill units in District Bijnor and District Bareilly and Distillery in District Bareilly were operating in violation of environmental norms. The unit at Dhampur was directed to be closed earlier vide order dated 23.04.2015 passed by this Tribunal and was allowed to reopen by subsequent order subject to certain conditions, including payment of Rs. 1 Crore towards environmental compensation and furnishing a bank guarantee of Rs. 10 lakhs. However, the pollution still continues to operate without compliance of conditions. Other units in Bijnor and Bareilly Districts are also operating illegally and so is the Distillery unit in Bareilly District.
>
> **2.** On 27.06.2019, Notice was issued by this Tribunal with reference to the allegations in the application. Reply has been filed by the UP State PCB which is practically of no value. Reply has been filed by the CPCB is that the closure directions have been issued in respect of Dhampur unit of Sugar Mill. Besides, show cause notices have been issued to other two Sugar Mills at Bareily and Sambhal. Distillery unit at Bareilly is non-functional on account of off season.
>
> **3.** Let the CPCB and State PCB furnish a further joint factual and action taken report with regard to all the four Units (three sugar mills and one distillery unit) by 30.11.2019 by e-mail at judicial-ngt@gov.in."

85. The record further reveals that CPCB had filed a report on 31.01.2020 in respect of inspection of all the four Units from 27.11.2019 to 29.11.2019. The said reports which have been placed on record again point out the violations of environmental laws by the Units on the earlier date of inspection i.e. May, 2019 in case of Dhampur Sugar Mills, Sambhal and inspection carried out on 06.02.2018 in respect of M/s. Dhampur Sugar Mills Ltd. Bijnor as well as the Distillery Unit and the inspection dated 15.03.2018 of M/s. Dhampur Sugar Mill DCM Ltd. at Meerganj.

86. Let us first take up the case of Dhampur Sugar Mill, Bijnor.

M/s. Dhampur Sugar Mill, Bijnor.

87. Inspection of the above unit which took place on 27.11.2019 & 28.11.2019 shows that Unit has not installed the flow meters, it has not installed the hazardous tank, it has provided a Kachha Lagon (for storage of treated effluent) having lining of PVC sheets, which is not proper and it may result in leaching because of wear & tear. The Unit has also not installed Condensate Polishing Unit (CPU) for high pressure boilers. It has also not gone for mechanical sludge handling system. The Unit has not provided and did not maintain the logbook for generation and disposal of ETP sludge. The Unit has also not complied with the direction of CPCB dated 01.07.2019 regarding dismantling of bypass provision. The CPCB had, therefore, recommended that the Unit must dismantle the bypass and maintain the logbook and follow other directions given in the inspection report. It was also observed that examination of waste water samples collected from the local drain (Ikara Nalla) flowing adjacent to the Unit premises revealed that COD in the drain waste water was more than that for raw sewage, which shows the addition of industrial effluent in to the drain. It was further observed that Unit did not have STP facility for treatment of domestic waste water. It was further observed that NOC obtained for the Unit from CGWA had expired on 27th April, 2019 but Unit continued to withdraw ground water without valid NOC. In crushing season 2018-2019, Unit was not found complying with respect to bypass of untreated effluent and an environmental compensation of **Rs. 57,30,000/-** was imposed upon it. However, thereafter, CPCB had reduced the environmental compensation to **Rs. 16,20,000/-** as per the revised policy dated 04.09.2019.

M/s Dhampur Sugar Mills Ltd. (Distillery Unit), Dhampur, Bijnor.

88. Perusal of the inspection report of CPCB in respect of above Unit's inspection conducted on 27.11.2019 & 28.11.2019 reveals that utilization of CPU permeate having pH of 4.3, COD- 1013 mg/l against 250 mg/l and BOD-323 mg/l against 100 mg/l in non-process activities like gardening was found to be in violation of ZLD norms and required to be stopped immediately. It was observed that Unit's NOC from CGWA expired on 07.04.2019 but Unit has continued to withdraw groundwater without valid NOC. The unit was asked to install three Piezowells around bio compost yard as per SOP for distilleries. The report further reveals that based upon inspection carried out by UPPCB officials on 02.08.2019, a Show cause notice for environmental compensation of **Rs. 6,75,000/-** was issued to the Unit for violation of ZLD norms and illegal disposal of spentwash in agricultural fields of nearby Village-Fena, Chandpur.

M/s. Dhampur Sugar Mills Ltd (Sugar Unit) Asmoli, Sambhal.

89. During inspection of the above unit on 28.11.2019, it was observed that wet scrubber (common to 70 TPH & 50 TPH boilers) was not in working condition. It was also observed that a new MGF (Multigrade Filter) and ACF (Activated Carbon Filter) for tertiary treatment was under installation as the installed capacity of existing MGF and ACF was inadequate. The Unit has not provided/maintained the logbook for the generation and disposal of ETP sludge and other solid wastes.

90. The Inspection Team had also collected sample from the drain flowing adjacent to the Unit premises. It further showed that the Unit did not have facility for the treatment of domestic waste water and untreated sewage was discharged and mixed with treated effluent of the sugar Unit.

91. It was observed that Unit has not maintained the logbook for the generation and disposal ETP sludge and other solid wastes including boiler ash generation. It was further observed that Unit should install Condensate Polishing Unit (CPU) for high pressure boilers (105 Kg/cm2) to treat process condensate for reuse in process. This will help in reduction of fresh water consumption. It was also observed that the Unit must ensure the maximum reuse of treated effluent in process. It was further observed that wet scrubber (attached to Boilers 70TPH & 50TPH) should be made operational before start of the attached boiler. It was also observed that all domestic waste water generated within the Unit's premises and residential colony shall be discharged after proper treatment. The Unit shall install Sewage Treatment Plant (STP) of adequate capacity for the treatment of domestic wastewater. It was further observed that the Unit shall obtain NOCs from CGWA for withdrawal of groundwater at earliest as the CGWA NOC has already been expired in May, 2019. It was also observed that the Unit's NOC from CGWA expired on 02.05.2019, but Unit has continued to withdraw groundwater without valid NOC.

M/s DSM Sugar Meerganj, Sidhauli Road, Meerganj, Bareilly, UP

92. Perusal of the inspection report of the above Unit dated 29.11.2019 reveals that the Unit has not installed flow meters at power turbine cooling, boiler, wet scrubber. The mechanical sludge dewatering/handling system for better management of wet sludge was not provided by the Unit. The Unit did not provide/maintain logbook for daily effluent generation and treatment, disposal of ETP sludge, Boiler ash and other solid wastes.

93. It was further observed that the Unit was bypassing the untreated effluent through a pipeline laid underground up to Peelakhar River in Sindholi Village (Lat: 28.556169 and Long: 79.241446) which ultimately meets River Ramganga. Samples of untreated effluent bypassed through PVC pipe and flowing through a drain were also collected by the CPCB team. The examination of the same revealed high value of BOD and COD in downstream of the confluence point of bypass line and river showed the impact of untreated effluent being discharged by the Unit.

94. The water quality of river Peelakhar was also examined and it was found that Unit doesn't have facility for the treatment of domestic wastewater and untreated domestic effluent was found being discharged outside the premises of the Unit through a hole in the wall of the Unit.

95. The Unit was directed to dismantle the bypass line. It was directed to take corrective measures to prevent the leaching of untreated effluent into the soil/ ground water. Unit was directed to maintain the logbook for the generation and disposal of ETP effluent, sludge, Boiler Ash, hazardous waste and other solid wastes. Unit was asked to implement the recommendations made by National Sugar Institute (NSI), Kanpur in validation report of ETP for session 2018-19. Unit was advised to install the flow meters at the places as recommended by the National Sugar Institute (NSI), Kanpur. It was directed that all domestic wastewater generated within the premises and colony shall be discharged after proper treatment and Unit must install Sewage Treatment Plant (STP) for the treatment of domestic wastewater.

96. The action taken status mentioned that UPPCB has imposed EC of **Rs. 17,70,000/-** vide letter dated **21.01.2020** upon the unit.

97. Thus, in short, the above inspection reports reveal gross violation of environmental norms i.e. non-installation of flow meters, discharge of untreated effluent into drain as well as other non-compliances which are essential for running a Unit without causing damage to the environment.

98. Thereafter, an I.A. bearing no. 376/2020 was filed by the applicant in which several objections were raised. The first objection related to the Dhampur Sugar Mills (Sugar Unit) Bijnor. The learned counsel for the applicant has referred to the inspection report which revealed number of deficiencies. Since these deficiencies have been pointed out in detail in earlier part of the judgment and these are, therefore, not being repeated for the sake of repetition. However, some additional points were also raised by Ld. Counsel for the applicant. It was submitted in the Interim Application that earlier an inspection of the Unit was conducted on 28.03.2019 and the said Unit was found bypassing the untreated effluent through a separate channel into the outside drain adjacent to the premises of the Mill, however, the officials of CPCB instead of immediately dismantling the same had allowed the Unit to function. Even the closure notice was issued on 23.04.2019 (after the crushing season was over on 15.04.2019). It was further submitted that CPCB by the said notice dated 23.04.2019 had levied an environmental compensation of Rs. 46,80,000/- for the period i.e. from 11.11.2018 to 15.04.2019).

99. It was further submitted by Ld. Counsel for the applicant that Unit had continued to operate despite closure order 23.05.2019 and, therefore, an enhanced environmental compensation of Rs. 57,30,000/- for the period from 11.11.2018 to 20.05.2019 was imposed upon it. However, strangely the CPCB vide its letter dated 06.11.2019 reduced the compensation to Rs. 16,20,000/- on the basis of CPCB order dated 04.09.2019 which contemplates that EC for closure direction issued on

the ground of non-compliance of described discharge/emission norms shall be levied for the period between the date of inspection and monitoring to the date of closing of manufacturing operation. In these circumstances, time period for violation was reduced from 191 days i.e. from 11.11.2018 to 20.05.2019 to 54 days i.e. from 28.03.2019 to 20.05.2019.

100. It was further submitted that the said reduction is illegal because the said Unit at the time of inspection on 28.03.2019 was found directly discharging the untreated effluent into the outside drain through bypass arrangement which is a serious offence and imposes direct threat to the local environment and also to the life and health of local/ nearby residents. It was submitted that the CPCB has not considered the deterrent factor while imposing the environmental compensation as the said bypass arrangement had continued for a considerable time i.e. up to 27.11.2019 and the inspection report dated 03.12.2019 has revealed that it was closed by RCC by the concerned Unit.

M/s Dhampur Sugar Mills, Dhampur, Sambhal.

101. So far as Sambhal Unit is concerned, it is submitted that it has a history of serious violation. On 08.12.2016 when inspection was conducted the Unit was discharging untreated effluent overflow outside the premises of the Unit. Thereafter, the inspection of the said Unit was conducted by CPCB on 10.01.2018 and it was again found to be bypassing untreated effluent discharge from the spray pond overflow and cooling tower, lowdown being discharged outside the premises region through the drain connecting to SOT river which meets river Ganga.

102. It was next alleged that a detailed investigation from expert institution/ organization has not been conducted regarding the actual damage caused to the environment due to the above-said violations.

M/s Dhampur Sugar Mills (Sugar Unit), Meerganj, District - Bareilly (U.P.)

103. Objections were also raised regarding functioning of Bareilly Unit and action taken by Pollution Board. It was observed that the Unit was bypassing the untreated effluent to a pipeline laid underground up to Peelakhar River in Sindholi Village which ultimately meets Ramganga River. It was further observed that said Unit was found discharging its untreated domestic effluent outside the premises of the said Unit through a hole in the wall. An environmental compensation of Rs. 17,70,000/- only was imposed upon the said Unit.

104. It was observed that even during the inspection of the said unit by CPCB on 10.01.2017, it was found that the said unit has not integrated all process stream and route them to ETP. Thereafter, inspection of the said unit was conducted by CPCB on 25.01.2018. The treated effluent sample taken from the outlet of the ETP of the said unit was found non-compliant with respect to BOD and DSS norms. The report further reveals that CPCB during the inspection held on 25.01.2018 had observed that the aeration tank of the ETP system of the said Unit was not properly established due to poor operation and maintenance of the ETP system and the treated effluent discharged doesn't meet the prescribed standards. It was also observed that the aeration tank of the ETP system of the said Unit was not properly established due to poor operation and maintenance of the ETP system and there is possibility of dilution of ETP system. It was, thus, submitted that CPCB has shown

extreme leniency /favouritism towards the violator, despite the serious violations and has even reduced the Environmental Compensation and all these factors need to be considered by this Tribunal.

105. The above facts have been taken by the Learned Counsel for the applicant from the reports and these, no doubt, point out towards gross violation of the environmental norms which shows indifferent attitude of the respondents in complying with environmental norms and this has caused great damage to the environment.

106. The above deficiencies noted during various inspections, thus, reveal that units have been carrying out their working without bothering about environment. The untreated water was being discharged into the drain but surprisingly the officials of CPCB had not taken immediate action and ordered for dismantling the bye-pass arrangement. No prosecution was launched against erring units under Water (Prevention and Control of Pollution) Act, 1974 except in case M/s. Dhampur Sugar Mills Ltd., (Sugar Unit) Dhampur, Bijnor. These issues will be discussed by us while deciding appropriate action against the erring unit, let us first examine the written submissions filed by CPCB.

107. The CPCB has filed written submissions and tried to justify its actions and also raised a preliminary objection that notices under Section 5 of The Environmental Protection Act, 1986, were issued to the units and if a person is aggrieved against the said direction, he or she can file an appeal under Section 16(c) of the NGT Act. The petitioner has, thus, an alternative efficacious remedy and should have approached the Tribunal in appeal against the said directions. It was further submitted that environmental compensation has been levied against the Units and their illegal activities have been stopped and restricted.

108. We have considered the objection raised by Learned counsel for CPCB, but are afraid that the same cannot be accepted for the simple reason that Original Application No. 539/2019 has not been filed only against the notices issued under Section 5 of the Environmental (Protection) Act but for the gross violation of environmental norms by all the four Units which have caused water pollution and affected the flora and fauna, ground water & soil and caused damage to the environment, which stands clearly established in the inspections carried out by CPCB and UPPCB.

109. The CPCB in its submissions has admitted the violations committed by all four Units and has submitted that it had issued directions to UPPCB vide letter dated 05.03.2020 and 14.05.2020 under Section 18(1)(b) of the Water (Prevention and control of Pollution) Act 1974 to comply with the following directions:-

> *i. UPPCB shall issue appropriate directions to the four units to ensure compliance of observations/ recommendations made in the joint inspection reports filled in NGT in O.A. No. 539/2019 in the matter of Adil Ansari vs M/s Dhampur Sugar Mills Ltd. and Ors.,*
>
> *ii. UPPCB shall issue appropriate direction to M/s Dhampur Sugar Mills, Sugar Unit, Meerganj, Bareilly, to deposit Rs.16,20,000/- toward EC as levied by CPCB vide direction dated 06/11/2019 under section 5 of Environment (Protection) Act, 1986 into UPPCB account open for such*
>
> *iii. UPPCB shall take appropriate legal action for closure and prosecution of M/s Dhampur Sugar mills Ltd. (Sugar unit), Asmoli, Sambhal Moradabad and Dhampur Sugar Mills, Sugar Unit, Meerganj, Bareilly, which were found to be bypassing the effluents into drains.*
>
> *iv. Compensation for withdrawal of ground water without permission will be recovered by these units.*

110. The CPCB has further pointed out that a joint meeting was also convened by CPCB with officials of UPPCB to review the action taken in compliance to this Tribunal's Order. The relevant observation regarding each Unit is discussed in coming paras and it reveals that violations of environmental norms were found and these continued for a considerable time.

Observations regarding deficiencies found in M/s Dhampur Sugar Mills, Sugar Unit, Dhampur, Bijnor

111. It is admitted that an inspection was undertaken on **28.03.2019** and it was observed that Unit was discharging its untreated effluent into the outside drain through bypass. Thereafter closure directions were issued on 23.04.2019 to the unit and Environmental Compensation of **Rs. 46,80,000/-** was imposed upon it and, thereafter, since the unit had kept operating till 20.05.2019 despite direction of closure, the EC amount was increased to **Rs. 57,30,000/-.** However, the CPCB vide its order dated 04.09.2019 has come out with a new policy relating to environmental compensation and as per the said policy, one of the condition to be considered for EC calculation is as under:-

> *"**Unless there is substantial evidence**, date of non-complying days would start with effect from date of non-compliance observed during inspection."*

112. It was also submitted that 'Deterrent Factor" is not applicable to the unit based on the methodology for assessing Environmental Compensation, since the unit closed the operation on 20.05.2019 and in subsequent crushing season, no illegal discharge was found during inspection conducted between 27.11.2019 to 28.11.2019. It was further submitted that there was no need for a detailed investigation from expert institution for EC calculation for the reason that such

calculation is to be undertaken only in the cases /instances of intentional discharges to the environment resulting into acute injury or damage to the environment or in case of injection of treated/partially treated/untreated effluent into ground water as per order dated 04.09.2019 issued by CPCB. The CPCB had, therefore, reduced the environmental compensation to Rs. 16,20,000/- vide its letter dated 06.11.2019. It may also be pointed out that UPPCB had thereafter further imposed an environmental compensation of Rs. 35,40,000/- vide its letter dated 22.06.2021.

113. In our opinion, since the inspection reports appearing on record reveal that Units were continuously polluting and damaging the environment, the CPCB has not correctly interpreted its order dt. 04.09.2019. The CPCB has ignored the fact that there was substantial evidence of continuous breach of environmental laws by the Unit in inspection reports dated 27.11.2019 and 28.11.2019. During the inspection on 27.11.2019 and 28.11.2019 it was observed that as per analysis of report of sample collected from ETP outlet, TSS was below detectable limit and therefore, the possibility of dilution cannot be ruled out. The unit had not installed Hazardous Tank in the boiling house. The Unit has provided Kachcha lagoon (for storage of treated effluent) having lining of PVC sheets, which is not proper and it may result in leaching because of wear & tear. The unit had not installed the condensate polishing unit. The unit had not provided mechanical sludge handling system for better management of sludge waste. The unit had not provided and maintained the log book for the generation and disposal of ETP sludge. The unit had not complied with CPCB direction dated 01.07.2019 of dismantling the bye-pass. The value of COD in the drain was more than that of raw sewage which shows the addition of industrial

effluent in drain. The unit did not have STP facility for treatment of domestic waste water. The inspection conducted by UPPCB on 23.09.2020 revealed that unit had yet to install STP. Thereafter a joint inspection of CPCB and UPPCB of the unit was carried out on 02.02.2021 & 03.02.2021 and it was observed that sugar effluent was getting mixed with the domestic sewage drain. The unit had, thus, not installed STP. The unit had also not installed condensate polishing unit till that date. In view of the above discussion, it is difficult to say that there is no substantial evidence to show continuous non-compliance of environmental norms by the Unit. It is also difficult to accept the argument that acute damage has not been caused to environment in view of the violations appearing on record.

M/S Dhampur Sugar Mills, Sugar Unit Asmoli, Sambhal, U.P.

114. Regarding the second unit i.e. M/S Dhampur Sugar Mills, Sugar Unit Asmoli, Sambhal, U.P, the CPCB has admitted the fact that unit was discharging effluents into the drain and had also made a bypass arrangement through which the untreated effluent was thrown into the drain when the premises was inspected on 10.01.2018. Thereafter, the unit was re-inspected on **01.03.2018** and it was observed that the unit had dismantled the bypass arrangements.

115. The unit was inspected on 28.11.2019 by joint committee. It was found that wet scrambler (Common to 70 TPH to 50 TPH boilers) was not in working condition. The unit had not provided/maintained the log book for the generation of RTP sludge and other solid wastes. The unit does not have facility for the treatment of domestic waste water and untreated sewage was discharged and mixed with treated effluent of sugar unit.

116. An inspection by UPPCB on 23.09.2020 also revealed that the unit was not found to have installed CPU. The STP was promised to be installed before start of crushing season.

117. As stated earlier, it is strange that despite the fact that there was a bypass arrangement vide which the effluent was discharged into the drain and it had continued for a long time, the CPCB had not thought fit to impose adequate compensation and had failed to launch prosecution against erring officials under Water (Prevention and Control of Pollution) Act, 1974 and has not bothered to conduct detailed investigation for EC calculation and since there was no STP, the untreated sewage discharge was being thrown into drain which ultimately merges into river and therefore, it cannot be said that there was no substantial evidence of continuous violation of norms and no injury was caused to the environment.

118. An inspection carried out on 14.01.2020 revealed that Decanter was installed but was yet to made functional. The team had observed that unit was discharging Sewage into Sot river through a channel which was also connected with the treated effluent storage lagoon for irrigation. The unit had not installed STP even on the said date.

119. The UPPBC has observed in its latest report dated 12.07.2021 that unit has installed Condensate Polishing Unit (CPU). However, STP plant for domestic sewage was yet to be made operational. The report also reveals that unit has installed condensate polluting unit on 12.07.2021 which ought to have been installed years ago.

120. It is strange that despite the above observations, the CPCB and UPPCB have taken a lenient view. We are, thus, not inclined to accept the argument of learned counsel for CPCB that there is no substantial

evidence showing continuous harm caused to environment by the Unit in question.

Dhampur Sugar Mills situated at Meerganj, District - Bareilly (U.P.)

121. We have also examined the submission of CPCB regarding the above Unit. The CPCB has admitted the fact that that vide its directions dated 28.02.2017, the Unit was directed to ensure compliance of wastewater discharge norms as per the notification dated January 14, 2016. Reply given by the Unit on 10.03.2017 was examined by CPCB and, thereafter, closure directions were issued on 15.05.2017 and unit was also asked to install online effluent monitoring system and to provide its connectivity to DPCB server. The unit was, thereafter, re-inspected on 25.01.2018 and CPCB had found non-compliance with respect to discharge norms for BOD and COD. The MISS concentration in the Aeration tank was very low. The leakages were observed from the syrup pumps, sulphide used pumps, magma pumps and condensate pumps. Since the unit had not submitted the adequacy assessment report a show-cause notice was issued under section 5 of the Environment (Protection) Act, 1986, dated 15.03.2018 for non-compliance of stipulated standards.

122. The unit had, thereafter, submitted revalidated ETP adequacy assessment report and irrigation management plan validated by NSI, Kanpur vide letter dated 15.06.2018. Other deficiencies regarding ETP were informed to the unit vide notice under Section 5 of the Environmental Protection Act dated 26.10.2018. Thereafter, CPCB and UPPCB had carried out inspections of all four units of M/s Dhampur Sugar Mills on 29.11.2019.

123. CPCB had directed UPPCB to take necessary action to stop discharge of untreated effluent into river by the unit and levy Environmental Compensation vide its direction dated 02.01.2020 issued u/s 18(1)(b) of the Water (Prevention and Control of Pollution) Act, 1974 and UPPCB had imposed an EC amount of Rs. 17,70,000/- on M/s Dhampur Sugar Mills, Sugar Unit, Meerganj, Bareilly.

124. During inspection on 29.11.2019, it was noticed that treated effluent is used for irrigation purpose of about 128 areas of land. However, the presence of BOD and COD in sample collected from bore well indicates that ground water is contaminated. It was found that unit had not installed flow meters at power Turbine cooling, boiler, wet scrubber, B & C Massecuite cooling as it was recommended by National Sugar Institute, Kanpur. The unit had not provided mechanical sludge handling system for better management of wet sludge. The unit was not maintaining log book for daily effluent generation and treatment, disposal of ETP sludge, Boiler Ash and other solid wastes. The unit was bye-passing the untreated effluent through a pipeline laid underground up to Peelakhar river which ultimately meets river Ramganga. Samples were collected from upstream and downstream of the Peelakhar River. The high value of BOD and COD in downstream shows untreated effluent was being discharged by the unit.

125. Thereafter, inspection of the Unit was conducted on 14.02.2021 and it was observed that untreated sewage water was found besides the boundary wall of sugar unit. It was observed that the Sewage Treatment Plant (STP) for sewage generated from colony located inside the unit premises was not yet made operational.

126. The perusal of above reports presents a very grim picture regarding the working of unit. The inspection carried out on 14.02.2021 has revealed that sewage water plant was not yet made operational by the unit even till that date for sewage generated from colony located inside the unit. It is, therefore, difficult to accept the contention of learned counsel for the CPCB that substantial evidence is not on record regarding continuous violations of environmental norms and damage caused to the environment.

127. The UPPCB has, thereafter, given its report regarding inspection of Dhampur Sugar Mill Ltd. Bareilly on 14.02.2021 and has observed that treated effluent as claimed by unit was being provided to farmers via a fixed HDPE pipeline but unit was not able to make the line operational and no flow was observed at the point of treated effluent supply to farm land. After about 3-4 hours, the flow was observed at the point in farmland in the HDPE line from where sample was collected. This indicates that unit is not providing treated effluent regularly for irrigation via HDPE pipeline. Sample analysis of treated effluent also showed high BOD and COD. STP was not found operational at the time of inspection. Untreated sewage was observed besides the boundary wall of the sugar mill. Thereafter, it is submitted that inspection was conducted on 01.07.2021 by UPPCB and it was found that much of the compliances have been made but some of them were still to be done and unit had assured UPPCB that it will be done before the next crushing season. The UPPCB has also issued notices to impose environmental compensation of Rs. 30,000/- per day from 14.01.2021 till the date of compliance made by the unit u/S 33A read with 27 (2) of Water (Prevention and Control of Pollution) Act 1974.

128. The above report also presents a dismal picture regarding functioning of unit and shows gross non-compliance regarding supply of untreated effluent to the farms. No doubt, considerable number of directions have been complied with but after inordinate delay and, therefore, it is nothing but failure of duty on the part of UPPCB to impose nominal environment compensation without carrying out a detailed study. The casual approach of CPCB is not appreciable and more painful is the fact that they have defended a wrong and asserted that no detailed investigation or study is required to assess the detailed actual damage though violations are writ large and admitted by it in its inspection reports.

M/S Dhampur Sugar Mills Ltd. (Distillery Unit) Dhampur, Bijnor.

129. We have also assessed the inspection report of the above unit. The joint inspection team had inspected the Ikra drain on 02.02.2021. The monitoring of upstream of the unit had revealed that the water quality of the drain is affected by the sewage discharge by the unit. The UPPCB had, thereafter issued show cause notice under Section 33A of Water Prevention and Control of Pollution) Act for closure of the unit and imposing environmental Compensation of Rs.30,000/- per day from 02.11.2020 till compliance was made by the unit. The UPPCB vide letter dated 20.07.2021, had also imposed environmental compensation of Rs. 65,70,000/- against the unit. The CPCB had, thereafter made a submission to the effect that UPPCB had filed a Complaint case bearing no. 3306/20-21 on 27.07.2021 against M/s Dhampur Sugar Mill Ltd. (Sugar Unit) Dhamrpur Biijnor U/S 43 of the Water (Prevention and control of Pollution) Act,. 1974 in the court of special Judicial Magistrate.

130. This report further reveals that unit was still polluting the drain and ultimately the river where its water merges with it. The polluted discharge has, continued for a considerable time.

131. Respondents no.1 to 3 at the very outset have made a submission in their written arguments that they were never served or heard in the present matter. It will be better to first decide the contention raised by the respondents. Perusal of the ordersheet reveals that the Tribunal vide its order dated 27.06.2019 had directed for the service of the respondents for 19.07.2019. Perusal of the record reveals that registered post letters have been dispatched to the respondents. There is, thus, a presumption that service has been effected upon them as per Section 27 of the General Clauses Act. The respondents No. 1 to 3 have also filed written submissions and in these circumstances, the contention of the respondents that they were never served or given an opportunity to present their version cannot be accepted.

132. Respondents no. 1 to 3, in their written submissions, have denied each and every allegation made in the application filed by the applicant. It is submitted that various directions issued by this Tribunal as well as directions issued by the joint inspection team have been complied with by the units. Environmental compensation imposed against the units has been paid and it is clear from the reports filed by the CPPCB and UPPCB that all the deficiencies stand removed. The units have also obtained NOC from CGWA for ground water abstraction.

133. Thus, in short, the respondents no. 1 to 3 have submitted that they have complied with all the recommendations made by the joint committee. It is further submitted that vide its earlier order in Shailesh Singh's case (Supra), the unit was allowed to operate on filing of review

application. The unit even at that time had complied with all the major recommendations of the inspection team and the same is clear from the order also.

134. We have given our thoughts to the matter. Perusal of the various inspections reports filed by CPCB and UPPCB clearly reveals that there was continuous violation of environmental laws by the Units for a considerable time and has continued as late as conclusion of final arguments. One thing which has very clearly emerged from above discussions is that all the four Units were continuously violating the environmental laws and have shown indifferent attitude and non-concern towards the harmful effect of pollution on environment. These Units, in fact, have deprived the other persons and local inhabitants of their right to live in a pollution free environment. There are flagrant violations of the environmental norms as have appeared clearly in various inspection reports filed by CPCB & UPPCB. These inspection reports have also not been disputed by respondent no.1, 2 & 3.

135. As discussed in earlier paras, no proper assessment of damages caused to the environment has been assessed. The action taken by the authorities can by no stretch of imagination can be said to be adequate. The CPCB as well as UPPCB have given their own explanation that they have issued requisite notices under Section 5 of Environmental Protection Act and have given various directions to the units to rectify the deficiencies and to stop the violation of environmental laws and have levied sufficient environmental compensation and have thus discharged their duty in accordance with law. However, as discussed in detail above, the CPCB & UPPCB have failed to take appropriate action on the violations appearing in their own reports.

136. It is, thus, clear that Units have totally ignored the Principle of sustainable development which contemplates that development should be brought without jeopardising environmental interest.

137. In **K. Guruprasad Rao v. State of Karnataka, (2013) 8 SCC 418**, the Hon'ble Apex Court explained the ambit and scope of sustainable development. In this case, the appellant had filed a PIL praying for the cancellation of a mining lease granted to the respondent and to stop mining within the radius of 1km. from Jambunatheswara Temple. The Court held that sustainable development includes preservation and protection of historical/ archaeological monumental wealth for future generations. Right to development includes the right to whole spectrum of civil, cultural, economic, political and social process for the improvement of people's well being and realisation of their full potential.

138. In **Citizen, consumer and Civic Action Group v. Union of India**, **AIR 2002 Mad. 298,** the Court has held that there should be a proper balance between protection of environment and development activities which are essential for progress. There can be no dispute that the society has to prosper, but it shall not be at the expense of environment. In the like vein, the environment shall have to be protected, but not at the cost of development of the society. Both development and environment shall co-exist and go hand-in-hand.

139. Unfortunately, the Units have not followed the Principle of sustainable development. They have followed the Principle of its own sustenance and unjust enrichment at the cost of damage to the environment.

140. Let us now examine the fact whether the Pollution Boards have levied just and adequate compensation. As discussed earlier, it is clear

that CPPCB and UPPCB have been very lenient towards the violations of environmental laws committed by these units and whatever has been done is a paper formality. The appropriate action has not been taken at the appropriate time and the officials have not performed their duty when it was required most to curb the pollution. The officials had shut their eyes towards the violations and were happy in issuing notices for compliance and by levying nominal compensation forgetting the fact that to keep the environment clean is their basic duty. They have forgotten the fact that people have imposed faith upon them so that they (people) can live in a pollution free atmosphere. It is disheartening to note the conduct of the officials and the action taken by them against the above four units which has encouraged the units to violate the norms. No doubt, the units had to comply with most of the norms in the end because of the directions issued by this Tribunal. However, even in last compliance report, it is submitted that some part of directions will be complied with before the next crushing season. Thus, compliance of directions issued were not complete even on the date of conclusion of final arguments.

141. We may now sum up the violations of environmental norms by each industrial unit and environmental compensation imposed upon it by CPCB and UPPCB.

(i) M/s Dhampur Sugar Mills Ltd., District Sambhal.

The unit has a history of serious violation/ non-compliances. However, neither any environmental compensation has ever been imposed upon it nor any prosecution has been initiated against it. During the inspection on 08.12.2016 by CPCB, the unit was found discharging the spray pond overflow outside the premises of the unit. The unit was also not found complying with the prescribed

standards of BOD of the ETP effluent sample. The unit was again inspected by CPCB on 10.01.2018. The unit was again found to be by-passing untreated effluent discharge from the spray pond overflow and cooling tower outside the premises through the drain which was connected to Sot River. During the inspection on 28.11.2019, it was found that unit did not have the STP facility for treatment of domestic waste water. The untreated sewage was being discharged mixed with treated effluent of the Sugar Unit. The unit had not installed Condensate Polishing Unit (CPU) for high pressure boilers. The unit had also not maintained the logbook for generation and disposal of ETP sludge and other solid wastes. The STP was not made operational till 12.07.2021 by the unit.

(ii) M/s Dhampur Sugar Mills Ltd., District Bijnor.

This unit was also found violating the environmental norms. The unit was inspected on 27.11.2019 and 28.11.2019. It had not installed flow meters at Mill Fibrizer, Massecuite cooling and RO reject. The Unit had not installed the Hazardous tank in the boiling house. The Unit had provided Kachcha lagoon (for storage of treated effluent) having lining of PVC sheets, which was not proper as it may result in leaching under wear & tear condition. The Unit had not yet installed the Condensate Polishing Unit (CPU) for high pressure boilers (105 Kg/cm2). The unit had not provided mechanical sludge handling system. The Unit had not provided and did not maintain the logbook for the generation and disposal of ETP sludge, Boiler ash and other solid wastes. The unit had not complied with CPCB direction dated 01.07.2019 for dismantling the bypass provision. The team also collected the wastewater sample from the local drain (Ikara Nalla) flowing adjacent to the Unit

premises. The value of COD in the drain waste water was found more than that for raw sewage, which showed the addition of industrial effluent in to drain. The Unit did not have STP facility for the treatment of domestic wastewater. The inspections carried out on 02.02.2021 and 03.02.2021 revealed that unit had not installed STP till the said date. The unit till 09.06.02021 had not converted the storage lagoon of 4,000 cubic meter to impermeable lagoon and had submitted that it will be done before the next crushing season.

Perusal of the record reveals that CPCB had first imposed an environmental compensation of Rs. 57,30,000/- on 01.07.2019 which was later on reduced to Rs. 16,20,000/- vide letter dated 06.11.2019. However, UPPCB on 22.06.2021 had imposed an environmental compensation of Rs. 35,40,000/-.

(iii) M/s Dhampur Distillery Unit, District Bijnor.

The unit was inspected on 27.11.2019 and 28.11.2019. it was found that there were violations of ZLD norms. The unit had not installed piezowells around biocompost yard as per SOP for distilleries.

An environmental compensation of Rs. 6,75,000/- was imposed upon the unit for violation of ZLD norms, illegal disposal of spentwash in agricultural fields of nearby village-Fena, Chandpur. The UPPCB had thereafter further imposed environmental compensation of Rs. 65,70,000/- vide letter dated 20.07.2021.

(iv) M/s Dhampur Sugar Mills Ltd., Meerganj, District Bareilly.

The unit was inspected on 27.11.2019 and 28.11.2019. It was found that the unit had not installed flow meters at power turbine cooling, boiler, wet scrubber, B & C Massecuite cooling. The unit

had not installed mechanical sludge dewatering/handling system. The unit had not provided/maintained logbook for daily effluent generation and treatment, disposal of ETP sludge, Boiler ash and other solid wastes. The Unit was found bypassing the untreated effluent through a pipeline laid underground up to Peelakhar River in Sindholi Village which ultimately meets River Ramganga. Samples were also collected from the upstream and downstream of the Peelakhar river where the effluent from the bypass line was meeting with the river water. The high value of BOD and COD in downstream of the confluence point of bypass line and river showed the impact of untreated effluent being discharged by the Unit. The Unit did not have facility for the treatment of domestic wastewater. Untreated domestic effluent was found being discharged outside the premises of the Unit through a hole in the wall of the Unit.

The CBCP had levied environmental compensation of Rs. 46,80,000/- vide letter dated 23.04.2019 and thereafter UPPCB had levied environmental compensation of Rs. 17,70,000/- vide letter dated 02.01.2020. The UPPCB had further issued notice for imposition of environmental compensation of Rs. 30,000/- per day from 14.01.2021 till the date of compliance made by the unit.

142. Keeping in mind the above facts and the discussion and gross violations of environmental norms by all the four units, this Tribunal is of the opinion that the compensation levied by CPCB and UPPCB upon the units is inadequate and insufficient as they have taken a very lenient view while imposing environmental compensation. The CPCB and UPPCB in fact have ignored the continuous violation of environmental norms by these units, with the result that these units have enriched themselves at

the cost of environment. The *'Polluter Pays'* principle contemplates that the Units which have polluted the environment must also pay the compensation not only to the victims of pollution but also for the cost of restoring the environment. The Hon'ble Supreme Court in "**Indian Council for Enviro-Legal Action v Union of India, 2011 (8) SCC 161"** has defined the principle of *'Polluters Pay'*. The said principle demands that the financial costs of preventing or remedying the damage caused by pollution should lie with the undertakings which cause the pollution. The respondents no. 1 to 3 will, therefore, have to pay adequate environmental compensation as per the above principle which also finds mentioned in Section 20 of the National Green Tribunal Act, 2010.

143. The Hon'ble Supreme Court in number of cases has laid down the criteria for assessing the compensation for causing damage to the environment. In **M C Mehta vs. Union of India, (1987) 1 SCC 395,** the Hon'ble Apex Court has held that while granting the compensation, the court must keep in mind the magnitude and financial capacity of the enterprise so that the compensation is such that it has a deterrent effect. The relevant para of the judgment runs as follows:

> "*31. We would also like to point out that the measure of compensation in the kind of cases referred to in the preceding paragraph must be co-related to the magnitude and capacity of the enterprise because such compensation must have a deferent effect. The larger and more prosperous the enterprise, the greater must be the amount of compensation payable by it for the harm caused on account of an accident in the carrying on of the hazardous or inherently dangerous activity by the enterprise.".*

144. The Hon'ble Apex Court in **Municipal Corporation of Delhi vs. Uphaar Tragedy Victims Association, 2011 14 SCC 481** has held that compensation should not only be compensatory but also punitive in nature so that it should deter future misconduct. It was further held that

several factors such as conduct of wrongdoer, gravity of the violation and willful disregard for safety norms have to be kept in mind while determining the punitive damages.

145. In **Sterlite Industries (India) Ltd. & Ors Vs. UOI, (2013) 4 SCC 575,** the Hon'ble Apex Court has held that while awarding compensation, the magnitude, capacity and prosperity of the errant company needs to be considered and has observed as under:-

> *"47. In the Annual Report 2011 of the appellant-company, at pages 20 and 21, the performance of its copper project is given. We extract hereinbelow the paragraph titled Financial Performance:*
>
> > *PBDIT for the financial year 2010-11 was Rs.1,043 Crore, 40% higher than the PBDIT of Rs.744 Crore for the financial year 2009-10. This was primarily due to higher LME prices and lower unit costs at Copper India and with the improved by-product realization.*
>
> *Considering the magnitude, capacity and prosperity of the appellant company, we are of the view that the appellant-company should be held liable for a compensation of Rs. 100 crores for having polluted the environment in the vicinity of its plant and for having operated the plant without a renewal of the consents by the TNPCB for a fairly long period and according to us, any less amount, would not have the desired deterrent effect on the appellant-company."*

146. In **Samaj Parivartana Samudaya & Ors. vs. State of Karanataka & Ors., (2013) 8 SCC 154,** the Hon'ble Apex Court was considering the issue of illegal mining by the lease-holders in District Bellary, State of Karnataka. The Hon'ble Court in the said case after observing flagrant violations by the lease holders had imposed a compensation of 10% of the sale-proceeds for reclamation and rehabilitation of the mining area.

147. The Hon'ble Apex Court in **M/s Goel Ganga Developers India Pvt. Ltd. vs. Union of India, MANU/SC/0841/2018,** while deciding an appeal against the order of this Tribunal imposing environmental compensation for restoration and restitution of environment damage by the project proponent had imposed a cost of Rs. 100 Crores or 10% of the

project cost which was to be in addition to further compensation of Rs. 5 Crores for contravening mandatory provisions of several environmental laws.

148. The Hon'ble Supreme Court in **M.C. Mehta Vs. Union of India, (2018) 18 SCC 397** had imposed compensation of 10% of the total project cost which was about Rs. 50 Crores upon one R. Kant & Co. who had developed Kant Enclave in Aravalli Hills for causing damage to the environment. The relevant para in this regard runs as follows:

> *"134. The Polluter Pays Principle is a wholesome principle that has been universally accepted and also adopted and applied in our country through several decisions of this Court. In this context, we may draw attention to among two of the earliest decisions rendered by this Court, namely, Indian Council for Enviro-Legal Action v. Union of India24 and Vellore Citizens' Welfare Forum v. Union of India.25 The law having been settled for more than two decades, we are of the view that it must be applied in a case such as the present. The damage caused to the Aravalli hills, as already noted, is irreversible. However, perhaps some of the damage could be remedied - (1996) 3 SCC 212 (1996) 5 SCC 647 at least we hope so. According to R. Kant & Co. it has expended 50 crore in developing Kant Enclave. We do not know the exact or accurate figure but proceed on the basis as stated. In our opinion, it would be reasonable to require R. Kant & Co. to deposit 10% of this amount (that is, 5 crore) for rehabilitation of the damaged areas. This amount should be deposited by R. Kant & Co. in the Aravalli Rehabilitation Fund within one month and in any case on or before 31st October, 2018".*

149. Thus, adequate compensation in the present case has to be assessed keeping in view the above principles laid down by the Hon'ble Apex Court in its various pronouncements regarding damage caused to the environment. As discussed earlier, the Respondent No. 1 to 3 have blatantly violated the environmental norms for a considerable long time and these violations would have continued but for the directions issued by this Tribunal. In case, the criteria laid down by the Hon'ble Supreme Court in the above judgments is applied and units are imposed 10% of the turnover as environmental compensation, it would have come to

approximately Rs. 400 Crores, since the information shown on the website of M/s Dhampur Sugar Mills Ltd. shows that the unit had a turnover of Rs. 3245.54 Crore in the financial year 2020-2021 and it had earned a profit of Rs. 120.62 Crore and similarly, the distillery/ chemical unit shows the turnover of Rs. 843.12 Crore and profit of Rs. 199.82 Crore. However, keeping in mind the fact that the units have complied with the orders of this Tribunal and directions issued by the concerned authorities and this fact stands confirmed by UPPCB, we deem it proper to impose a compensation of Rs. 5 Crores (Rupees Five Crores) against each unit which will be in addition to the compensation already levied by the Pollution Boards.

150. Each unit i.e. (i) M/s Dhampur Sugar Mills Ltd., District Sambhal, (ii) M/s Dhampur Sugar Mills Ltd., District Bijnor, (iii) M/s Dhampur Distillery Unit, District Bijnor and (iv) M/s Dhampur Sugar Mills Ltd., Meerganj, District Bareilly is now directed to pay environmental compensation of Rs. 5 Crores (Rupees Five Crores) each as mentioned above within a period of 30 days from today.

151. We have also noticed that prosecution has been initiated against M/s Dhampur Sugar Mills Ltd., District Bijnor by UPPCB under Section 24 of the Water (Prevention and Control of Pollution) Act, 1974 which is punishable under section 43 of the said Act. However, no prosecution seems to have been launched against the other three units. Let the CPCB and UPPCB examine this aspect and if there is incriminating material on record, they may initiate the proceedings against the other units as well under the above Act, as per law.

152. The amount of compensation as stated above may be deposited with the CPCB so that the above amount can be utilized for remedial

action to be taken for restoration of flora and fauna, damage caused to the soil, agricultural crops as well as to the ground water.

153. A detailed study, of course, needs to be carried out regarding extent of damage caused to the environment. For that purpose, we constitute a Committee which will have three Members from CPCB (to be nominated by Chairman, CPCB), one from UPPCB and the District Magistrates concerned. The Committee will be constituted within a period of 15 days from today. The committee will hold its first meeting within 15 days, thereafter. It is further directed that the said Committee will assess the damage caused to the environment which includes contamination of the soil, underground water, loss to the agricultural crops, contamination of river Sot and river Peelakhar as well as the damage caused due to air pollution by the units. The Committee will also interact with the farmers and local inhabitants who may have suffered loss/ damage because of pollution caused by the units. It shall thus, assess the compensation not only for the loss/ damage caused to the local inhabitants but also for the cost of remediation and submit its report to the Chairman, CPCB within a period of three months from today.

154. On the basis of the above report, the remediation work will be carried out under the supervision and directions of the Chairman CPCB, who will also ensure compliance thereof. In case, after carrying out the remediation work, if some balance amount remains out of the amount of environmental compensation, it will be utilized for the purpose of cleaning the environment and if, the remediation requires more funds, the deficiency will be made good by the respondents no. 1 to 3. It is further directed that the said Committee will complete the above task within a period of one year.

155. The Units will deposit the compensation amount within one month from the date of judgment. In case they fail to do so, the CPCB will issue directions for closure of Units till the payment of compensation. In an eventuality the compensation is not paid within one month, the realization of the same will also be ensured by the District Magistrates concerned. It is ordered accordingly.

156. We also impose a litigation cost of Rs. 10 lacs which shall be paid by respondents no. 1 to 3 to CPCB within a period of one month and the said amount will be utilized for the protection and preservation of environment.

157. We are further of the opinion that following directions are necessary for ensuring compliance of environmental norms by the units:-

i.) All the Units must ensure continuous running of ETPs even during the non-crushing season for the adequate maintenance of required bio-mass so that the ETP is able to take the load/shock when it receives the pollution load/effluent at the start of the crushing season.

ii.) All the Units in question must provide for separate Energy Meter for entire ETP setup including its accessory units with data logging facility which shall be inspected by UPPCB and CPCB from time to time.

iii.) UPPCB must ensure Interlocking of Pollution Control Devices with production processes (one way but not vice-versa) so as to ensure that whenever ETPs/PCDs are intentionally closed, the production also comes to halt.

iv.) Regular inspections should be carried out by the statutory authorities in both halves of the crushing season and also at least once in non-crushing season.

v.) Since the Asmoli Unit falls in the critical zone with respect to ground water withdrawal, an assessment of water recharge needs to be carried out by CGWA or UPGWB before issuance of NOC.

The Statutory Authorities are directed to ensure the above directions strictly so that industries may run without causing damage or loss to the

environment as well as to the local inhabitants and farmers residing nearby the Units.

158. A copy of this judgment be forwarded to CPCB, UPPCB, District Magistrates of District-Sambhal, Bijnor and Bareilly by e-mail for compliance.

159. In view of above judgment, the Original Application no. 539/2019 and I.A. No. 376/2020 stand disposed of.

Adarsh Kumar Goel
Chairperson

Sudhir Agarwal,
Judicial Member

M. Sathyanarayanan,
Judicial Member

Brijesh Sethi,
Judicial Member

Dr. Nagin Nanda,
Expert Member

September 01, 2021
Original Application No. 539/2019
Interim Application No. 376/2020
AP, AG & AS

Annexure 2

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ITEM NO.20 Court 8 (Video Conferencing) SECTION XVII

S U P R E M E C O U R T O F I N D I A
RECORD OF PROCEEDINGS

Civil Appeal No. 5975/2021

M/S DHAMPUR SUGAR MILLS LTD. & ORS. Appellant(s)

VERSUS

ADIL ANSARI & ORS. Respondent(s)

(IA No.123838/2021-EXEMPTION FROM FILING C/C OF THE IMPUGNED JUDGMENT and IA No.123836/2021-STAY APPLICATION and IA No.123839/2021-EXEMPTION FROM FILING O.T.)

Date : 08-10-2021 This appeal was called on for hearing today.

CORAM : HON'BLE MS. JUSTICE INDIRA BANERJEE
HON'BLE MR. JUSTICE J.K. MAHESHWARI

For Appellant(s) Mr. Mukul Rohatgi, Sr. Adv.
Mr. Shyam Divan, Adv.
Ms. Amita Katragadda, Adv.
Ms. Jyoti Dastidar, Adv.
Mr. Prakhar Pandey, Adv.
Mr. Aman Chandola, Adv.
For M/S. Cyril Amarchand Mangaldas Aor, AOR

For Respondent(s) Ms. Preeti Singh, AOR
Mr. Sunklan Porwal, Adv.
Mr. shubham Kaushik, Adv.
Ms. Saumya Dwivedi, Adv.

UPON hearing the counsel the Court made the following
O R D E R

Issue notice, returnable in six weeks.

In the meanwhile there will be a stay of the order impugned to restricted to the direction for payment of compensation of Rs.5,00,00,000/- (Rupees five crores only) in respect of each unit and to the costs of Rs.10,00,000/- imposed on the Respondent Nos. 1

to 3.

A committee may be constituted to make a detailed study as directed by the order impugned, but no further steps shall be taken by the Committee for a period of six weeks from date.

(GULSHAN KUMAR ARORA)
AR-CUM-PS

(MATHEW ABRAHAM)
COURT MASTER (NSH)

Annexure 3

IN THE SUPREME COURT OF INDIA

CIVIL APPELLATE JURISDICTION

CIVIL APPEAL No. 5975 of 2021

In the Matter of: -

M/S DHAMPUR BIO ORGANICS LIMITED …. Appellant

Versus

Adil Ansari & Ors …. Respondents

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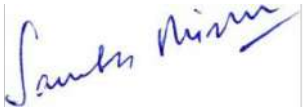
S.No.	Particular	Page No.
1.	Joint Committee Report titled "Detailed study report on 'Extent of damage caused to the Environment' due to sugar units of M/s Dhampur Sugar Mills Ltd. in Distt. Sambhal, Distt. Bijnor and Distt. Bareilly and Distillery Unit in Bijnor, U.P" in compliance of order dated 04.11.2022 passed by this Hon'ble Court.	**01-149**

Date: 15.11.2022
Place: Delhi



Saurabh Mishra
Advocate-on- Record
AOR Code:1597
For the Respondent No. 5/CPCB

Detailed study report on

"Extent of damage caused to the environment"

due to sugar units of

M/s Dhampur Sugar Mills Ltd. in Distt. Sambhal, Distt. Bijnor and Distt. Bareilly and Distillery Unit in Bijnor, U.P

(15-18th November 2021 & 1-2nd December 2021)

In the matter of

Adil Ansari Vs.

M/s Dhampur Sugar Mills Ltd., Asmoli

(Sugar Unit) &

M/s Dhampur Sugar Mills Ltd., Dhampur

(Sugar and Distillery Unit) &

M/s Dhampur Sugar Mills Ltd., Meerganj

(Sugar Unit)

[O.A. NO. 539/2019]

-Prepared by-
The Joint Committee of CPCB, UPPCB, CGWA and District Administrations of Bareilly, Sambhal and Bijnor

Constituted by

Hon'ble National Green Tribunal

(Order dated 01st September, 2021)

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DETAILED STUDY REPORT ON EXTENT OF DAMAGE CAUSED TO THE ENVIRONMENT DUE TO UNITS OF M/S DHAMPUR SUGAR MILLS LTD. & ORS., IN DIST. SAMBHAL, DIST. BIJNORE & DIST. BAREILLY AS PER HON'BLE NGT ORDER DATED 01.09.2021 CARRIED OUT BY JOINT COMMITTEE OF CPCB, UPPCB, CGWA & DISTRICT ADMINISTRATIONS OF DISTT. BIJNOR, SAMBHAL & BAREILLY ON 15TH TO 18 NOVEMBER, 2021 AND 1ST TO 2ND DECEMBER 2021

1. Subject Matter

Matter: Adil Ansari Vs. M/s. Dhampur Sugar Mills Ltd. & Ors, O.A. No. 539/2019

Subject: Detailed study report on assessment of the damage caused to the environment which includes contamination of soil, underground water, loss to agricultural crops, contamination of River Sot and river Pilakhar as well as due to air pollution due to Units of M/s Dhampur Sugar Mills Ltd. & ors. in distt. Bijnor, distt. Bareilly and distt. Sambhal.

2. Order of Hon'ble NGT dated 01.09.2021

The Hon'ble NGT in the said matter passed the following directions vide its order dated 01.09.2021:

"*A detailed study, of course, needs to be carried out regarding extent of damage caused to the environment. For that purpose, we constitute a Committee which will have three Members from CPCB (to be nominated by Chairman, CPCB), one from UPPCB and the District Magistrates concerned. The Committee will be constituted within a period of 15 days from today. The committee will hold its first meeting within 15 days, thereafter. It is further directed that the said Committee will assess the damage caused to the environment which includes contamination of the soil, underground water, loss to the agricultural crops, contamination of river Sot and river Pilakhar as well as the damage caused due to air pollution by the units. The Committee will also interact with the farmers and local inhabitants who may have suffered loss/ damage because of pollution caused by the units. It shall thus, assess the compensation not only for the loss/ damage caused to the local inhabitants but also for the cost of remediation and submit its report to the Chairman, CPCB within a period of three months from today*"

3. Constitution of committee as per Hon'ble NGT Order dated 01.09.2021 and Joint Survey and Monitoring in the surrounding areas of Dhampur Sugar Mills Ltd. & Ors on 15.11.2021 to 18.11.2021 and 01.12.2021 to 02.12.2021.

In compliance of Hon'ble NGT order, CPCB constituted a committee having representative from CPCB, UPPCB and concerned District Magistrates vide office order B-19123/WQM-II/Legal/NGT-6/CPCB/2020-21, dated 29.09.2021.

First meeting of the committee was held on 11.10.2021. The committee noted the Supreme Court order dated 08.10.2021 in Civil Appeal No. - 5975/2021 in the matter of M/S Dhampur Sugar Mills Ltd. & Ors. Vs Adil Ansari & Ors., where the Hon'ble Supreme Court has directed that "*a committee may be constituted to make a detailed study. However, no further steps shall be taken by the committee for a period of six weeks*".

The committee members agreed that there is no stay on undertaking the study by the committee. The committee members undertook deliberation to plan the study as per terms of reference of the committee. After detailed deliberation, the committee arrived at the following decisions;

1. Teams shall be constituted, each team comprising officials from CPCB, UPPCB, District Administration, District Agricultural/ Horticulture Departments, Uttar Pradesh Ground Water Department (UPGWD), Uttar Pradesh Jal Nigam (UPJN), District Health Departments and Department of Fisheries for carrying out study for assessment of the damage to environment which includes contamination of the soil, underground water, loss to the agricultural crops, contamination of river Sot and river Pilakhar as well as the damage caused due to air pollution by the units. The Committee will interact with the farmers and local inhabitants who may have suffered loss/ damage because of pollution caused by the units.
2. UPPCB and District administrations will ensure the participation of officials from concerned department like, District Agricultural/ Horticulture departments, UPGWD, Uttar Pradesh Jal Nigam (UPJN), District Health Departments and Department of Fisheries.
3. Field visit and sampling shall be carried out from 20th Oct, 2021 onwards.
4. Assessment of damage to the soil will be done by District Agricultural Departments. Sampling and testing if required will also be done by District Agricultural Departments.
5. Data for groundwater aquifer flow and groundwater depth shall be provided by UPGWD.
6. Assessment of damage to groundwater will be done by UPGWD. Groundwater sampling for this purpose will be done by UPGWD. Testing of groundwater may be done either by UPGWD or CPCB.
7. Mapping of River Sot, Pilakhar and Ikra drain from origin to confluence, for identification of pollution sources and impact of concerned unit on their quality shall be carried out by teams of officials from CPCB, UPPCB and district administration.
8. Damage caused due to air pollution by the units shall be assessed in terms of loss of yield and produce of crops and fruits. If required local health service center will be contacted to ascertain facts on health impact through District Health Department.
9. Loss to agriculture crops and fruit orchards in terms of yield and productivity shall be assessed by District Agricultural/ Horticulture Departments.
10. The study being carried out by committee shall be video-graphed/ photographed. The videography and photography shall be arranged by UPPCB.
11. UPPCB shall also provide details of public complaints/ newspaper clippings published in past related to the pollution carried by the units.

4. Joint survey of study areas around the units of DSM

Joint teams comprising of officials from CPCB, UPPCB, UPGWB and District administrative officials from Jal Nigam, Agriculture department, Horticulture department carried out survey of the surrounding areas of units of M/s Dhampur Sugar Mills Ltd. & ors. in Meerganj (Bareilly), Asmoli (Sambhal) and Dhampur (Bijnor) on 15.11.2021 to 18.11.2021 and 01.12.2021 to 02.12.2021. The grid sampling method has been adopted for monitoring to assess the damage caused to the environment, with each grid of distance 1.5 km covering a peripheral area of 4 km around the unit.

Joint teams collected samples of ground water from borewell, handpumps and samples of soil from agriculture lands under cultivation, for assessment of any impact on soil and ground water. Joint teams also interacted with the villagers to evaluate the impact of pollution caused by these units i.e., discharge of treated/untreated effluent and boiler ash on health of villagers, animal health and crop productivity. Photography and videography of all inspections/Sampling were carried out during the survey.

5. Joint survey and monitoring in the surrounding areas of M/s Dhampur Sugar Mills Ltd (DSM), Meerganj, District Bareilly (Sugar Unit) and River Pilakhar during Nov. 15-16, 2021

Four teams comprising of officials from CPCB, UPPCB, UPGWB and District administrations, carried out survey and monitoring to assess the damage caused to the environment of 11 selected villages around the DSM unit and monitoring of River Pilakhar during Nov. 15-16, 2021. M/s DSM unit situated at Meerganj tehsil in the Bareilly District of U.P. The peripheral area of 4 km was taken for grid sampling with each grid length of 1.5 km, sampling has been done from each grid. The unit is located between NH24 on its west direction and Nahal canal & Pilakhar River in its north and North-East directions. Pilakhar river flows from North direction of the unit and joins Nahal canal in Sindhauli village of Bareilly thereafter flows towards south and joined Bakhra river. Based on the catchment of Pilakhar and Bakhra river contour gradient considered from the unit towards the flow directions of both the river in North and North-East directions.

Following 11 villages/ area were included in the survey;

i. Village Sindhauli Block-Meerganj, Dist- Bareilly, U.P
ii. Village Nagariya Kalayanpur Block-Meerganj, Dist- Bareilly, U.P
iii. Village Juner Block-Meerganj, Dist- Bareilly, U.P
iv. Village Gula. Block-Meerganj, Dist- Bareilly, U.P
v. Village Nagariya Sadat, Block-Meerganj, Dist- Bareilly, U.P.
vi. Village- Nausana, Block-Meerganj, Dist- Bareilly, U.P.
vii. Village- Kulchha Khurd, Block-Meerganj, Dist- Bareilly, U.P.
viii. Village Sillapur Block-Meerganj, Dist- Bareilly, U.P
ix. Village Khamariya sani Block-Meerganj, Dist- Bareilly, U.P
x. Village Sanjarpur Block-Meerganj, Dist- Bareilly, U.P
xi. Village Thiriya Brahmpur Block-Meerganj, Dist- Bareilly, U.P

Details of survey and monitoring are as under:

5.1. Assessment of contamination of soil

Twenty-two soil samples were collected from 11 selected villages to assess the soil health with respect to 12 parameters i.e. three macro-nutrients namely Nitrogen (N), Phosphorus (P) and Potassium (K); one secondary nutrient, Sulphur (S); five micro nutrients namely Boron (B), Zinc (Zn), Copper (Cu), Iron (Fe) and Manganese (Mn); and three physical parameters, pH, Electrical conductivity (EC) and Organic carbon (OC).

Location of soil samples collected with respect to the DSM unit are shown in figure 1 below;

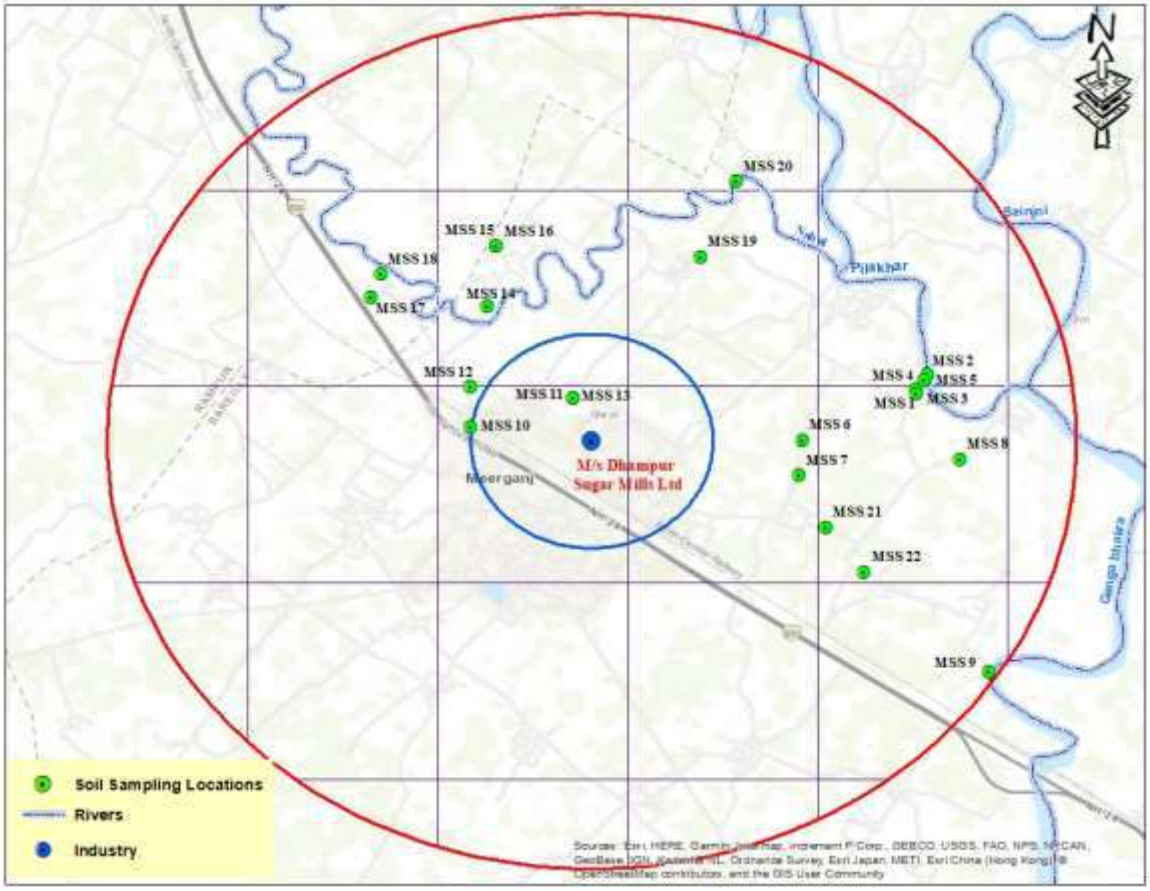


Figure 5.1 Location of soil sample collected in Meerganj block, Bareilly

Table 5.1 Details of soil samples collected from Meerganj block

Sample code	Sample location	Coordinate		Remark
		Latitude	Longitude	
MSS 1	Village- Sidhauli	28.555370,	79.241129	Ploughed field
MSS 2	Village- Sidhauli	28.555805,	79.241376	River bed of Pilakhar River
MSS 3	Village- Sidhauli	28.555307,	79.241068	Reported effluent discharge point near River Pilakhar
MSS 4	Village- Sidhauli	28.554621,	79.240418	Ploughed field
MSS 5	Village- Sidhauli	28.554231,	79.240413	Sugarcane field

Sample code	Sample location	Coordinate		Remark
		Latitude	Longitude	
MSS 6	Village- Sidhauli	28.550261,	79.230822	Ploughed field
MSS 7	Village- Nagariya Kalayanpur	28.5473173,	79.2304540	Ploughed field
MSS 8	Village- Jauner	28.548647,	79.244092	Sugarcane field
MSS 9	Village- Gula	28.530777,	79.246527	Ploughed field
MSS 10	Village- Nagariya Sadat	28.551421	79.2027740	Sugarcane
MSS 11	Village- Nagariya Sadat	28.5538	79.2114105	Ploughed field
MSS 12	Village- Nagariya Sadat	28.5548019	79.2027740	Mustard/Sugarcane
MSS 13	Village- Nagariya Sadat	28.5538444	79.21141052	Banana Orchard
MSS 14	Village- Nausana	28.56155586	79.20422363	Guava Orchard
MSS 15	Village- Nausana	28.56662	79.204939	Mustard field
MSS 16	Village- Nausana	28.566635	79.204968	Sugarcane field
MSS 17	Village- Kulchha Khurd	28.56234	79.1944	Mustard field
MSS 18	Village- Kulchha Khurd	28.56428	79.19519	Garlic field
MSS 19	Village-Sillapur	28.56573	79.2222	Sugarcane field
MSS 20	Village- Khamariya Sani	28.5721	79.22517	Sugarcane field
MSS 21	Village- Sanjarpur	28.54294	79.23276	Wheat field
MSS 22	Village-Thiriya Brahmpur	28.53915	79.236	Sugarcane field

Analysis results of soil samples collected are as below;

Table 5.2 Analysis results of physical parameters and macro-nutrients of soil samples collected from Meerganj block

Sample Code	pH	Available Organic Carbon		Available Phosphate		Available Potash		Available Nitrogen		Electrical Conductivity	
		(%)	Fertility Class	kg/ha	Fertility Class	kg/ha	Fertility Class	kg/ha	Fertility Class	dS m-1	Fertility Class
MSS 1	7.1	0.34	L	9	L	89.6	L	76.5	L	1	CG
MSS 2	7.4	0.28	L	4.5	L	67.2	L	63	L	**1.8**	CG
MSS 3	7.7	0.34	L	18	M	123.2	M	76.5	L	**1.2**	CG
MSS 4	7.5	0.3	L	9	L	44.8	L	67.5	L	**1.5**	CG
MSS 5	7.1	0.39	L	4.5	L	44.8	L	87.75	L	1	CG
MSS 6	6.5	0.21	L	9	L	44.8	L	47.25	L	**1.2**	CG
MSS 7	6.5	0.36	L	4.5	L	33.6	L	81	L	**1.5**	CG
MSS 8	6.9	0.16	L	4.5	L	56	L	36	L	**1.5**	CG
MSS 9	7	0.19	L	4.5	L	56	L	42.75	L	**1.6**	CG
MSS 10	7.9	0.09	L	9	L	67.2	L	20.25	L	**1.4**	CG
MSS 11	7.5	0.19	L	4.5	L	44.8	L	42.75	L	**1.1**	CG
MSS 12	7.2	0.27	L	4.5	L	67.2	L	60.75	L	**1.5**	CG
MSS 13	6.8	0.25	L	9	L	67.2	L	56.25	L	**1.7**	CG
MSS 14	7.3	0.37	L	4.5	L	67.2	L	83.25	L	1	CG
MSS 15	7.9	0.16	L	9	L	33.6	L	36	L	**1.1**	CG
MSS 16	7.1	0.24	L	9	L	78.4	L	54	L	1	CG
MSS 17	7.1	0.34	L	4.5	L	44.8	L	76.5	L	**1.6**	CG
MSS 18	7.4	0.21	L	4.5	L	134.4	M	47.25	L	**1.3**	CG
MSS 19	7.2	0.25	L	4.5	L	44.8	L	56.25	L	**1.3**	CG
MSS 20	7.2	0.12	L	4.5	L	67.2	L	27	L	**2**	CGSC
MSS 21	6.9	0.13	L	4.5	L	56	L	29.25	L	**1.2**	CG
MSS 22	7.3	0.12	L	4.5	L	56	L	27	L	1	CG

Note: Values of Nitrogen (N), Phosphorus (P) and Potassium (K) are in kg/hectare. Unit of Electrical conductivity (EC) is in deci Seimens per meter (dS m^{-1}). Organic carbon (OC) is represented in %.

***L- Low, M-Medium, CG - Critical for germination, CGSC – Critical for Growth of Sensitive Crops**

Table 5.3 Analysis results of secondary nutrient and micro-nutrients of soil samples collected from Meerganj block

Sample Code	S	B	Cu	Fe	Mn	Zn
MSS 1	10.73	0.97	0.23	3.44	3.76	0.04
MSS 2	12.9	0.62	0.46	6.36	2.55	1.41
MSS 3	17.19	1.09	0.12	5.38	4.88	0.03
MSS 4	12.76	0.72	0.23	4.89	5.1	0.02
MSS 5	14.06	0.62	0.23	4.78	4.37	0.03
MSS 6	12.64	0.56	0.23	4.83	3.76	0.02
MSS 7	11.34	0.82	0.35	4.83	5.45	0.03
MSS 8	11.08	1.05	0.35	4.94	5.86	0.03
MSS 9	10.44	0.74	0.58	4.78	5.2	0.05
MSS 10	0.69	4.93	0.6	0.04	10.73	4.34
MSS 11	0.46	5.96	0.68	0.03	12.64	4.17
MSS 12	0.58	5.53	0.95	0.03	9.14	4.89
MSS 13	0.58	5.08	0.44	0.03	9.98	4.28
MSS 14	0.46	5.33	0.36	0.02	13.54	4.67
MSS 15	0.81	4.85	0.82	0.04	11.37	4.78
MSS 16	0.46	5.18	0.72	0.02	10.44	4.61
MSS 17	0.46	4.22	0.72	0.03	12.47	4.56
MSS 18	0.46	4.68	0.56	0.02	13.08	5.44
MSS 19	12.64	0.56	0.58	5.38	4.95	0.03
MSS 20	12.79	0.56	0.58	3.54	5.35	0.04
MSS 21	12.96	0.72	0.92	3.54	5.38	0.03
MSS 22	13.54	0.89	0.42	4.67	5.56	0.06

Note: values of Boron (B), Zinc (Zn), Copper (Cu), Iron (Fe), Manganese (Mn) and Sulphur (S) are in ppm.

Observation based on interaction with farmers on Soil health:

Residents of Sindhauli village and labours working in the agricultural field of Sindhauli village informed the team about effluent discharge into river Pilakhar. The joint team visited the reported discharge point near Pilakhar River and observed the outlet of the pipeline covered with sacks, hay/agricultural waste. However, no discharge was observed at the time of inspection. Joint team collected sample MSS3 from the mentioned location, which doesn't show any physio-chemical characteristics different from other soil samples collected from Sindhauli village.

Observations based on the analysis results of soil samples:

1. pH, Electrical conductivity (EC) and Organic carbon (OC) value range from 6.5 - 7.9, 1 - 2 dS m-1 and 0.09 - 0.39%, respectively.
2. Nitrogen (N), Phosphorus (P), Potassium (K) and Sulphur (S) value range from 20.25 - 87.75 kg/hectare, 4.5 - 18 kg/hectare, 33.6 - 134.4 kg/hectare and 0.46 - 17.19 ppm, respectively
3. Boron (B), Zinc (Zn), Copper (Cu), Iron (Fe) and Manganese (Mn) value range from 0.56 - 5.96 ppm, 0.02 - 5.44 ppm, 0.12 - 0.95 ppm, 0.02 - 6.36 ppm and 2.55 - 13.54 ppm, respectively.
4. District Agriculture Department, Bareilly, vide letter dated 23.03.2022 (**Annexure-1**) has reported that;

- *No industrial factor was evident which damage the crops and crop yield.*
- *pH of 22 soil samples found normal and values of other parameters are also in range as found in the area.*
- *Damage to crops/agricultural field due to industry not evident since last 05 years as District Agriculture Department conduct periodic survey to monitor the crop productivity/cultivation. In past few years the crop production was found normal.*

5.2. Assessment of contamination of ground water

Ground water samples were collected from 11 villages to assess its quality. Samples were collected from handpumps and borewell located in surveyed villages and tube well located in agricultural fields at different depths of 40 ft to 200 ft to evaluate the groundwater quality. Surface water samples were also collected from 02 different locations in Village Sindhauli.

Location of ground water and surface water samples collected from surrounding localities of the DSM unit are shown in figure below:

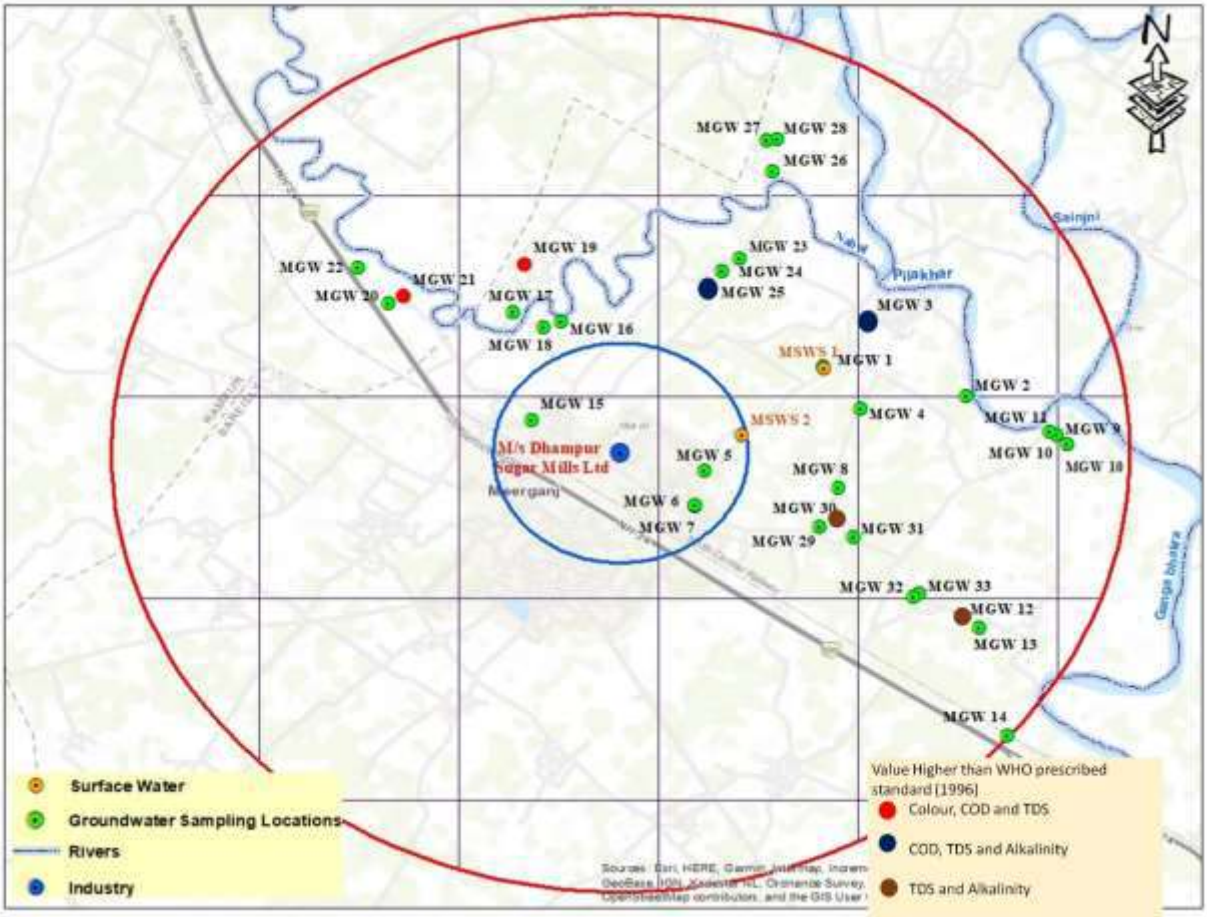


Figure 5.2 Sampling locations of ground water and surface water samples collected in Meerganj

Details of ground water samples collected:

33 groundwater samples were collected from borewell/ handpumps and tubewells around 11 villages. All samples were analysed for general parameter and analysis for heavy metals were carried out for 11 samples (one sample from each village). River Pilakhar flows from north (Bazpur, Uttarakhand) towards south and confluence with river Bakhra at Village Jauner, Bareilly. Considering contour gradient of the study area towards confluence point of river Pilakhar with river Bakhra at Jauner Village, location upstream side (U/s) of the confluence point may be considered as having less potential of impact of any discharge on groundwater and villages/locations at downstream (D/s) side of confluence point may be considered as high potential of groundwater contamination due to any discharge from industrial unit. 14 groundwater samples were collected from U/s locations and 19 groundwater samples were collected from D/s locations. The groundwater samples were compared with prescribed specification of ionic concentration in groundwater by WHO standards (1996).

Details of the samples collected are as follow:

Table 5.4 Details of ground water samples collected

Sample code	Sample location	Bore well / Handpump	Depth (ft)	MOC of pipe	Coordinate	
					Latitude	Longitude
MGW 1	Village Sidhauli	Hand pump	150	GI	28.557365	79.229294
MGW 2	Village Sidhauli	Hand pump	100	GI	28.554841	79.240812
MGW 3	Village Sidhauli	Hand pump	20	MS	28.561023	79.232951
MGW 4	Village Sidhauli	Hand pump	100	MS	28.553796	79.232273
MGW 5	Village Nagariya kalyanpur	Hand pump	100	MS	28.5487713	79.219740
MGW 6	Village Nagariya kalyanpur	Hand pump	55	PVC	28.545840	79.219013
MGW 7	Village Nagariya kalyanpur	Hand pump	100	MS	28.545921	79.218970
MGW 8	Village Nagariya kalyanpur	Bore-well	200	GI	28.5473173	79.230454
MGW 9	Village Jauner	Hand pump	45	PVC	28.551639	79.248017
MGW 10	Village Jauner	Hand pump	45	PVC	28.551941	79.247473
MGW 11	Village Jauner	Hand pump	40	MS	28.550869	79.248862
MGW 12	Village Gula	Hand pump	40	PVC	28.536777	79.240470
MGW 13	Village Gula	Hand pump	100	GI	28.535848	79.241833
MGW 14	Village Gula	Hand pump	100	GI	28.526925	79.244092
MGW 15	Village Nagariya Sadat	Handpump	150	GI	28.552877	79.205871
MGW 16	Village Nagariya Sadat	Handpump	80	PVC	28.560958	79.208282
MGW 17	Village Nausana	Handpump	80	GI	28.561769	79.204338
MGW 18	Village Nausana	Handpump	120	PVC	28.560485	79.206871
MGW 19	Village Nausana	Handpump	40	PVC	28.565702	79.205314
MGW 20	Village Kulchha Khurd	Handpump	150	GI	28.562509	79.194396
MGW 21	Village Kulchha Khurd	Borewell	65	GI	28.563056	79.195581

Sample code	Sample location	Bore well / Handpump	Depth (ft)	MOC of pipe	Coordinate	
					Latitude	Longitude
MGW 22	Village Kulchha Khurd	Borewell	200	MS	28.565441	79.191913
MGW 23	Village Sillapur	Hand pump	180	GI	28.56621	79.22253
MGW 24	Village Sillapur	Hand pump	80	MS	28.56518	79.22114
MGW 25	Village Sillapur	Hand pump	60	MS	28.5636	79.22021
MGW 26	Village Khamariya sani	Hand pump	180	MS	28.57335	79.22524
MGW 27	Village Khamariya sani	Hand pump	80	MS	28.57596	79.22557
MGW 28	Village Khamariya sani	Hand pump	80	MS	28.57593	79.22472
MGW 29	Village Sanjarpur	Hand pump	80	MS	28.54412	79.22895
MGW 30	Village Sanjarpur	Hand pump	60	MS	28.54474	79.23039
MGW 31	Village Sanjarpur	Hand pump	100	MS	28.54331	79.23171
MGW 32	Village Thiriya Brahmpur	Hand pump	100	MS	28.53864	79.23696
MGW 33	Village Thiriya Brahmpur	Hand pump	60	MS	28.53837	79.23655

Analysis results of ground water samples collected during survey is tabled below;

Table 5.5 Analysis results of ground water samples

Sample Code	Depth (ft)	pH	Color	COD	TDS	Total Alkalinity	Total Hardness	Cl^-	F^-	SO_4^{-2}	NO_3-N	As	Co	Cr	Cu	Fe	Mn	Ni	Pb	Zn
WHO Std.				4.0	500	30-500	250-500	100	1.5 – 2.4	250	10-45	0.1	0.05	0.01	0.2	5.0	0.2-0.3	0.2	0.1	2.0
MGW1	150	7.4	BDL	BDL	416	363	291	8	BDL	34	BDL	-	-	-	-	-	-	-	-	-
MGW2	100	7.7	BDL	BDL	454	363	154	14	BDL	39	BDL	0.01	BDL	BDL	BDL	2.06	0.12	BDL	BDL	0.29
MGW3	20	7.5	BDL	6	642	528	311	30	BDL	100	BDL	BDL	BDL	BDL	0.2	3.71	0.44	BDL	BDL	5.18
MGW4	100	7.6	BDL	8	350	282	182	12	BDL	33	BDL	-	-	-	-	-	-	-	-	-
MGW5	100	7.4	BDL	BDL	288	250	255	8	BDL	BDL	BDL	-	-	-	-	-	-	-	-	-
MGW6	55	7.6	BDL	9	474	411	327	18	BDL	28	BDL	0.02	BDL	BDL	BDL	1.98	0.24	BDL	BDL	0.01
MGW7	100	7.7	BDL	6	342	314	323	16	BDL	11	BDL	-	-	-	-	-	-	-	-	-
MGW8	200	7.3	BDL	BDL	356	302	295	10	BDL	25	BDL	0.01	BDL	BDL	BDL	0.36	0.14	BDL	BDL	BDL
MGW9	45	7.6	BDL	BDL	602	403	319	10	0.3	93	8.6	BDL	BDL	BDL	BDL	0.4	0.08	BDL	BDL	0.02
MGW10	45	7.4	BDL	BDL	428	371	242	20	BDL	43	2.1	-	-	-	-	-	-	-	-	-
MGW11	40	7.2	BDL	BDL	374	294	190	10	0.3	46	BDL	BDL	BDL	BDL	BDL	1.58	0.31	BDL	BDL	0.14
MGW12	40	7.5	BDL	BDL	696	580	400	42	0.2	109	BDL	-	-	-	-	-	-	-	-	-
MGW13	100	7.6	BDL	BDL	374	298	537	12	BDL	57	BDL	0.02	BDL	BDL	BDL	1.16	0.13	BDL	BDL	0.15
MGW14	100	7.4	BDL	BDL	344	242	263	8	0.2	61	BDL	-	-	-	-	-	-	-	-	-
MGW15	150	7.1	BDL	BDL	546	431	380	14	BDL	84	BDL	-	-	-	-	-	-	-	-	-
MGW 16	80	7.5	BDL	6	716	467	501	40	BDL	273	BDL	BDL	BDL	BDL	BDL	3.52	0.46	BDL	BDL	0.39
MGW 17	80	7.7	BDL	5	366	298	267	12	BDL	42	BDL	-	-	-	-	-	-	-	-	-
MGW 18	120	7.5	BDL	BDL	316	262	267	10	BDL	38	BDL	-	-	-	-	-	-	-	-	-

Sample Code	Depth (ft)	pH	Color	COD	TDS	Total Alkalinity	Total Hardness	Cl^-	F^-	SO_4^{-2}	NO_3-N	As	Co	Cr	Cu	Fe	Mn	Ni	Pb	Zn
MGW 19	40	7.2	24	10	948	709	634	108	BDL	115	BDL	0.01	BDL	BDL	BDL	3.37	0.61	BDL	BDL	0.12
MGW 20	150	7.7	BDL	BDL	362	298	287	16	BDL	27	BDL	-	-	-	-	-	-	-	-	-
MGW 21	65	7.1	96	9	718	472	404	72	BDL	138	BDL	BDL	BDL	BDL	BDL	7.94	1.14	BDL	BDL	BDL
MGW 22	200	7.5	BDL	BDL	436	326	255	16	BDL	56	BDL	-	-	-	-	-	-	-	-	-
MGW 23	180	7.3	BDL	BDL	388	286	339	12	BDL	85	BDL	BDL	BDL	BDL	BDL	1.16	0.17	BDL	BDL	0.05
MGW 24	80	7.2	BDL	BDL	522	480	368	12	BDL	38	BDL	-	-	-	-	-	-	-	-	-
MGW 25	60	7.4	BDL	29	1014	806	343	106	0.4	BDL	0.3	0.11	BDL	BDL	BDL	7.88	1.57	BDL	BDL	BDL
MGW 26	180	7.6	BDL	BDL	488	391	271	28	BDL	83	BDL	0.02	BDL	BDL	BDL	2.24	0.29	BDL	0.02	0.27
MGW 27	80	7.6	BDL	BDL	352	294	311	12	BDL	62	BDL	-	-	-	-	-	-	-	-	-
MGW 28	80	7.6	BDL	BDL	366	294	271	14	0.2	75	BDL	0.01	BDL	BDL	BDL	0.85	0.11	BDL	BDL	0.09
MGW 29	80	7.5	BDL	BDL	318	250	218	18	BDL	49	BDL	0.02	BDL	BDL	BDL	2.58	0.12	BDL	BDL	0.14
MGW 30	60	7.4	BDL	BDL	842	617	493	34	BDL	296	0.3	-	-	-	-	-	-	-	-	-
MGW 31	100	7.5	21	BDL	332	294	295	12	BDL	29	BDL	-	-	-	-	-	-	-	-	-
MGW 32	100	7.5	BDL	BDL	334	262	263	14	BDL	40	BDL	0.03	BDL	BDL	BDL	0.23	0.17	BDL	BDL	0.04

Sample Code	Depth (ft)	pH	Color	COD	TDS	Total Alkalinity	Total Hardness	Cl^-	F^-	SO_4^{-2}	NO_3-N	As	Co	Cr	Cu	Fe	Mn	Ni	Pb	Zn
MGW 33	60	7.3	BDL	BDL	466	391	303	32	0.4	35	BDL	-	-	-	-	-	-	-	-	-

Note: All units in mg/l except pH and colour; colour measured in colour units

WHO standard values are indicated below the name of the respective parameter. Higher observed values are highlighted.

Observation based on interaction with farmers on ground water:

1. Resident of village Sindhauli, Gula, Kulchha, Thiriya Brahmpur, Nagariya Sadat and Nausana informed that ground water from handpump/borewell turns yellowish after keeping it in vessels for few hours. Total 17 groundwater samples were collected from village Sindhauli (4 samples), Gula (3 samples), Kulchha (3 samples), Thiriya Brahmpur (2 samples), Nagariya Sadat (2 samples) and Nausana (3 samples). Out of 17 groundwater samples collected from above mentioned villages, seven groundwater samples (two samples from village Sindhauli and one sample each from above mentioned villages) were analysed for heavy metals. The groundwater analysis of samples from these villages suggests Fe value (Fe - 7.91 ppm) higher than WHO groundwater standard (1996) in one sample (village Kulcha) and higher than drinking water standard ISO:10500 (2012) in six samples (village Sindhauli, Gula, Kulcha, Nagariya Sadat and Nausana). All the samples were from depth 20-80 ft, which suggest that, the changes in colour of water to yellow after few minutes of storing might be due to oxidation of iron present in groundwater. Out of seven samples analysed for heavy metals three sample were from u/s of the unit and other four sample were d/s side of the unit.
2. Residents of Village Kulchha Khurd and Nausana informed that they are getting sick (majorly stomach related diseases and issue of stone formation) due to continuous consumption of groundwater for drinking purposes. Cattles are also getting sick due to continuous consumption of groundwater for drinking purposes. Total six samples were collected from village Kulchha Khurd (3 samples) and Nausana (3 samples); out of six samples two samples (MGW 19 and 21), one from each village show high TDS, Total Alkalinity and Total Hardness of 948 & 718 mg/l, 709 & 472 mg/l and 634 & 404 mg/l respectively for MGW 19 & 21, which may be the reason of gastro-intestinal issues. Both the samples were collected from 40-65 ft of depth from North & North -west direction of the unit.

Observations based on the analysis results of ground water:

1. **Colour** (24 & 96 hazen), **COD** (10 & 9 mg/l) and **TDS** (948 & 718 mg/l) were found higher than WHO prescribed limit at MGW 19 and 21, respectively, which is near left and right bank of Nahal canal, respectively. Both locations were u/s side of the unit having less potential of impact of any discharge on groundwater.
2. **COD** (6 & 29 mg/l), **TDS** (642 & 1014 mg/l), and **Alkalinity** (528 & 806 mg/l) were higher than WHO prescribed limit at MGW 3 and MGW 25, respectively. **TDS** (696 & 842 mg/l) and **Alkalinity** (580 & 617 mg/l) were higher than WHO prescribed limit at MGW 12 and MGW 30 respectively. All the mentioned samples were from shallow depth of 20-80ft of borewell/ handpump. All the locations were from outside 1 km of radial distance from the unit. Sample MGW 3 and MGW 25 were nearer to Nahal Canal and River Pilakhar at u/s side of the unit and MGW 12 and 30 were towards d/s side of the unit. Thus, both u/s and d/s side of the unit shows higher COD, TDS, and Alkalinity which do not show any distinct pattern of groundwater contamination.
3. All heavy metals are within WHO prescribed limit of groundwater quality except **Fe and Mn** at MGW – 21 & 25 (Fe – 7.94 & 7.88 mg/l and Mn – 1.14 & 1.57 mg/l, respectively at

MGW 21 and 25) and Mn at MGW 3, MGW 11, MGW 16, MGW 19, MGW 21 and MGW 25 (varies from 0.31 to 1.57 mg/l).

5.3. Assessment of crop damage

Observation based on interaction with farmers on crop damage:

- Sh. Sumeri Lal, a farmer and resident of village Sindhauli engaged in growing vegetables (cabbage and coriander) informed the pollution is caused by boiler ash from chimney of nearby sugar mill. He informed that boiler ash has adverse impact on yield/productivity in vegetables (loss by 30% in production), which results in less income from the vegetables. The same issues were informed in case of nearby Banana orchard. Photographic evidence of ash deposition on leaves of cabbage and nearby crops in vegetable field were collected.
- Residents of Village Nagariya Sadat informed that fly ash (boiler ash) coming from stack of nearby sugar mill cause difficulty in breathing and deposits over the crops resulting in damage to crops (in the form of low yield).

Observation based on assessment of Agricultural, Horticulture and Regional Forest Department on crop damage:

- District Agriculture Department, Bareilly has informed that around 2850 hectare of agriculture land exist around the DSM unit which is generally used for cultivation of sugar cane and others crops but no adverse impact has been found of crop damage in last five-years by district office during regular inspections.
- Based on the observation of District Horticulture Department, Bareilly, no evidence has been found of orchard/garden damage due to the pollution by DSM Meerganj unit in the surveyed areas.
- As informed by Regional Forest Department, Meerganj range, Bareilly, no evidence of damage has been found on trees due to the pollution by DSM Meerganj unit.
- It may be concluded from findings of survey conducted by District Agriculture, Horticulture and Forest departments and interaction with local farmers & residents that there are no evidence of loss of yield or damage to crop, however, deposition of fly ash on leaves of crops/ orchard & cloths of residents of nearby villages do occur which may cause inconvenience/ uneasiness.
- District Cane Officer, Bareilly vide letter dated 29.03.2022 has provided the statistical data of sugarcane crop production for the last 05 years (i.e. year 2017-18, 2018-19, 2019-20, 2020-21 and 2021-22) of nearby areas of M/s DSM, Meerganj, District Bareilly (Sugar Unit). **Annexure-2**
- District Horticulture Officer, Bareilly submitted that *there was no issue observed regarding any type of damage to gardens or orchard due to industrial pollution during survey of villages located nearby M/s DSM, Meerganj, District Bareilly (Sugar Unit).* **Annexure-6**
- Regional Forest Officer, Meerganj Range, Bareilly also reported that *there was no adverse impact of industrial pollution on vegetation found in villages located nearby M/s DSM, Meerganj, District Bareilly (Sugar Unit) and no evidence of any factor was observed regarding environmental damage.* **Annexure-7**

5.4. Survey and monitoring of Pilakhar river

Survey and monitoring of the river Pilakhar and its tributaries were carried out on 15th and 16th November 2021. River water samples were taken during monitoring to assess the river water quality. River Pilakhar originates from Bazpur area. River Pilakhar is a seasonal river and receive flow from local drains, canals and surface runoff during rainy season. Details of surveyed location are shown in Figure 5.3 and 5.4;

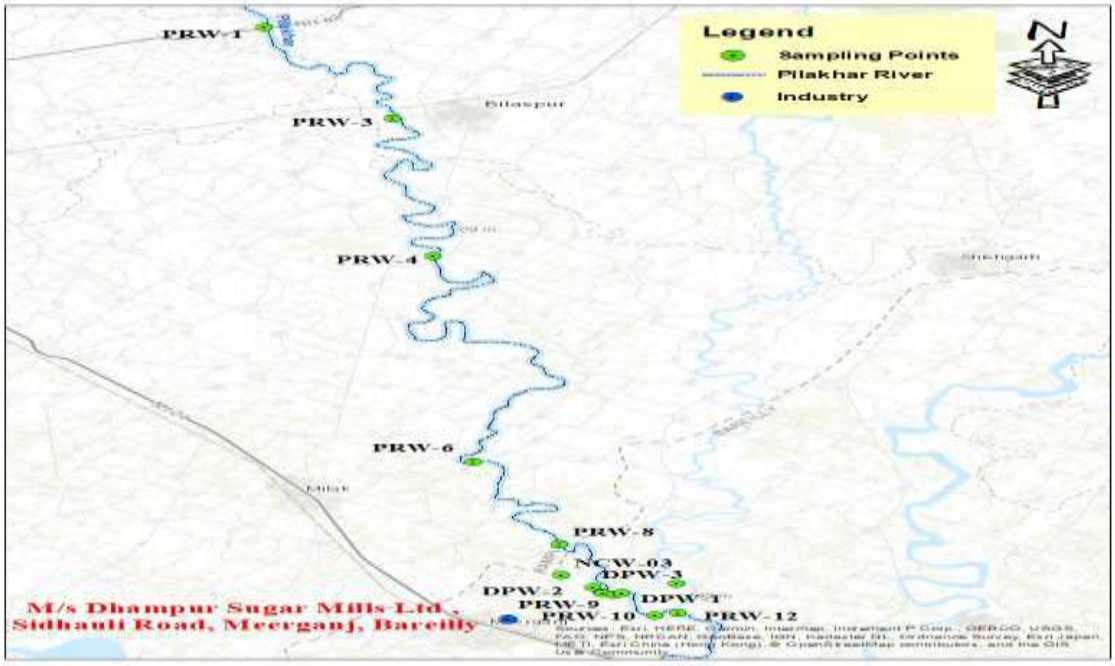


Figure 5.3 Sampling locations of Pilakhar river

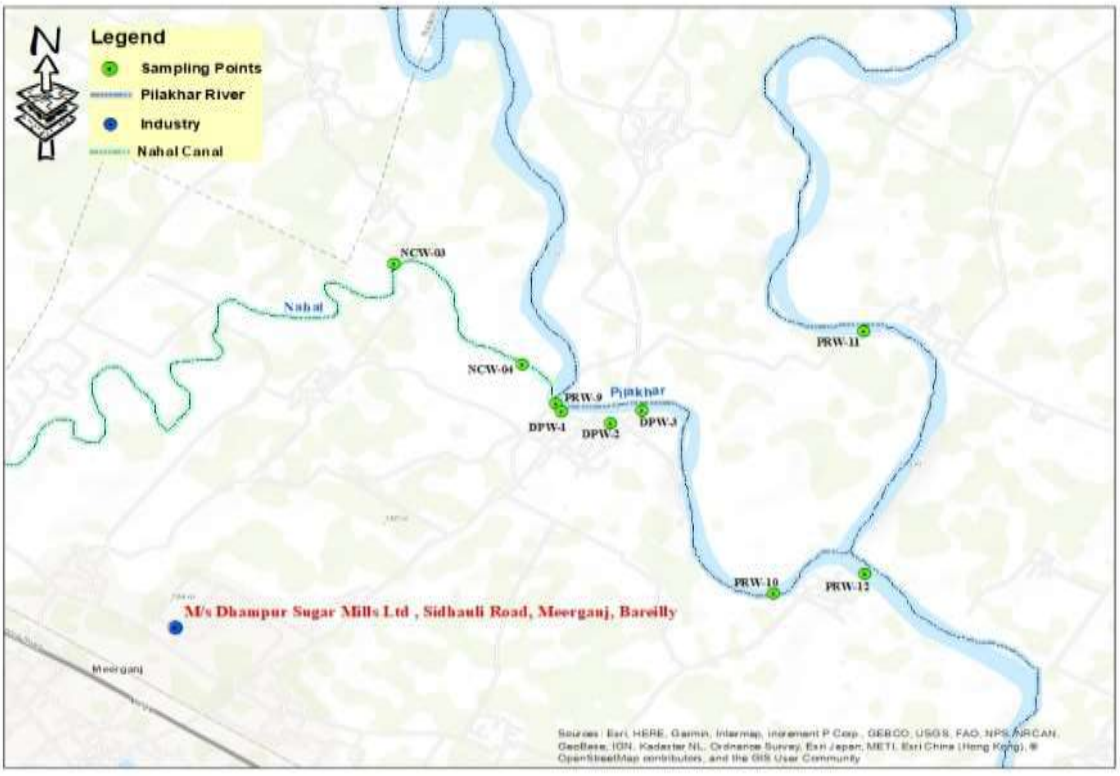


Figure 5.4 Sampling locations of Pilakhar river

Details of surveyed locations are tabled below:

Table 5.6 Details of surveyed locations of river Pilakhar

Location code	Sampling location	Co-ordinate	Flow condition	Sample taken (Y/N)	Major observation
Sampling details of river water e.g. Sot river					
PRW-1	River Pilakhar near Bhot Police station, Rampur-Bilaspur road, Lalavpur, UP	28.847994, 79.1587143	Flowing	Yes	• Flow is observed in Pilakhar River • As informed by locals the river water is being used for irrigation purpose.
PRW-2	River Pilkhar at Ashokpur village d/s to Bhot	28.831808, 79.164582	Flowing	No	• As informed by locals the river water is used for irrigation purpose. • No drains were observed to be discharging into the river.
PRW-3	River Pilkhar at Kemri dam bridge, Rampur Road	28.802164, 79.187453	Flowing	Yes	• River water was found being used for the irrigation purpose.
PRW-4	River Pilkhar at Simra, Rampur	28.733113, 79.196484	Stagnant water due to barrage	Yes	• Located on the passage-way bridge at Simra, Rampur.
PRW-5	River Pilkhar at Khamariya village d/s to Simra Rampur	28.699273, 79.190348	Stagnant	No	• No drains were observed to be discharging directly from the village to river Pilakhar during visit. • The river water was observed stagnant.
PRW-6	River Pilakhar at Pashupura bridge, near Zamapur, Dist. Rampur	28.629507, 79.205264	Stagnant	Yes	• The river water was observed stagnant at this location. • No drains were observed to be discharging into the river
PRW-7	River Pilakhar at Chak Behta d/s to Pashupura bridge, near Zamapur, Rampur	28.609064, 79.213309	Stagnant	No	• No drains were observed discharging directly from the village to river Pilakhar during visit. • The river water was observed stagnant
PRW-8	River Pilakhar at U/s of Sindhauli	28.588194,	Flowing	Yes	• Flow was observed in River

Location code	Sampling location	Co-ordinate	Flow condition	Sample taken (Y/N)	Major observation
	near village Saijna-Ki-Gotia	79.224394			• No pollution source was observed in nearby area.
NCW-01	River channel (Peria canal) near Saijana-Ki-Gotia before c/f with river Pilakhar (Dry/water body stagnant)	28.587313, 79.232517	Stagnant and dry at pockets	**No**	• As informed, Peria canal discharge into river Pilakhar • Peria canal was found having patches of water at upstream of road.
NCW-02	Nahal canal near Kulcha Khurd village U/s of Khamaraia Sani village	28.560123, 79.203597	Dry	No	• It is informed that Nahal canal which earlier discharged into river Pilakhar but found dry during survey. • Only backflow of river Pilakhar in monsoon period/ high flow reaches the upstream locations of its confluence with Pilakhar.
NCW-03	Nahal (Canal Channel) near village Khamaria Sani bridge	28.572361, 79.224893	Stagnant	Yes	• Only backflow of river Pilakhar in monsoon period/ high flow of Pilakhar reaches the location near Khamaria Sani. • Nahal Canal Water observed stagnant and clear in patches.
NCW-04	Nahal (Canal Channel) near Sindhauli bridge before C/f with river Pilakhar (Lean flow)	28.566242, 79.231911	Lean/meagre flow	Yes	• This sampling location on Nahal canal just 100 meters before confluence of river Pilakhar near cremation ghat. • Very lean flow was observed in Nahal canal during monitoring at this location.
PRW-9	River Pilakhar near Sindhauli bridge u/s of Sindhauli village after confluence of Nahal Channel	28.563889, 79.233761	Flowing	Yes	• River water at this location found muddy. • Depth of river water approximately was 8-10 feet and width were approximately 15 meters.

Location code	Sampling location	Co-ordinate	Flow condition	Sample taken (Y/N)	Major observation
					• Sindhauli drain -1 (DPW-01) was observed in D/s from this sampling location.
DPW-1	Drain-1 from Sindhauli village near Sindhauli bridge and Chaukidar house	28.56339, 79.234057	Flow observed but not measurable	Yes	• Drain was carrying domestic sewage & confluence at right bank of the river Pilakhar. • Lean flow was observed
DPW-2	Drain-2 from Sindhauli village near Purana Mandir, Sindhauli	28.562652, 79.236775	Flow observed but not measurable	Yes	• Drain carries domestic sewage from village and colour of the drain water was observed dark grey/black at the time of visit. • Flow was observed but flow not measurable due to lean flow • Drain was covered with solid waste and construction RCC material from nearby houses and old drain channel.
DPW-3	Drain-3 from Sindhauli village near Mathia D/s	28.56345, 79.238492	Flow observed	Yes	• Drain was carrying domestic sewage & confluence with at right bank of the river Pilakhar. • Lean flow was observed.
PRW-10	River Pilakhar before c/f with river Bhakhra at u/s of Jauner village near Shiv Mandir	28.552318, 79.245683	Flowing	Yes	• This sampling location of river Pilakhar is at U/s of Jauner village and before confluence with river Bhakhara. • No pollution source observed in vicinity.
PRW-11	River Bhakhra near Narkhera village, Brhamdev Mandir u/s of c/f with river	28.568276, 79.250597	Flowing	Yes	• Flow was observed in River. • No pollution source observed in vicinity.

Location code	Sampling location	Co-ordinate	Flow condition	Sample taken (Y/N)	Major observation
PRW-12	River Bhakhra after C/F of river Pilakhar at D/s of Jauner village	28.553501, 79.250693	Flowing	Yes	• River Bhakhara flows near the farm lands on bank of river, hazy water observed after confluence of river Pilakhar. • A drain from Jauner village was observed at D/s from this sampling locations discharging into river Bhakhara.

Analysis results of sample collected during survey and monitoring of Pilakhar river is tabled below:

Table 5.7 Analysis results of Pilakhar River/Canal/drain

	Location code	pH	Colour	COD	BOD	TSS	TDS	Cl^-	NO_3-N	SO_4^{2-}	PO_4-P	NH_3-N	DO	Cr	Cu	Fe	Mn	Ni	Pb	V	Zn
Stretch - I	PRW-1	8	103	8	1.7	40	498	20	0.5	118	BDL	0.4	7.9	BDL	BDL	1.35	0.06	BDL	BDL	BDL	0.02
	PRW-3	8.1	110	6	1.3	46	460	18	0.7	104	0.03	0.4	6.8	BDL	BDL	1.77	0.06	BDL	BDL	BDL	0.02
Stretch - II	PRW-4	8.1	138	8	1	61	440	14	0.7	94	0.05	0.4	7.2	BDL	BDL	1.34	0.1	BDL	BDL	BDL	0.02
	PRW-6	8	121	9	4	53	430	16	0.5	82	0.05	0.3	5.4	BDL	BDL	1.67	0.08	BDL	BDL	BDL	0.03
Stretch - III	PRW-08	8.1	106	12	1.3	56	406	14	0.3	79	0.03	0.4	7.5	BDL	BDL	1.84	0.08	BDL	BDL	BDL	0.01
	NCW-03	7.8	58	BDL	BDL	7	270	8	BDL	21	0.05	0.2	5.1	BDL	BDL	1.11	0.06	BDL	BDL	BDL	BDL
	NCW-04	7.8	37	13	1.1	29	438	14	0.6	86	0.09	0.5	5.3	BDL	BDL	0.42	0.33	BDL	BDL	BDL	BDL
Stretch - IV	PRW-09	8.1	169	7	1	61	330	10	0.4	55	0.09	0.4	7.8	BDL	BDL	1.88	0.07	BDL	BDL	BDL	0.02
	PRW-10	8.2	215	7	BDL	80	300	12	0.4	57	0.05	0.4	7.8	BDL	BDL	2.53	0.09	BDL	BDL	BDL	0.02
	DPW-1	7.3	112	252	127	89	904	147	9.1	116	0.152	44	-	BDL	0.03	1.28	0.36	BDL	BDL	0.09	0.03
	DPW-2	7.1	206	483	153	602	1160	22	8.51	177	0.202	55	-	0.02	0.04	**36**	1.53	0.02	0.03	0.06	0.12
	DPW-3	7.1	134	459	148	267	860	144	2.6	282	3.58	46	-	BDL	0.03	**6.38**	0.56	BDL	BDL	0.12	0.06
Stretch -	PRW-11	8.1	60	11	1.2	12	274	10	BDL	23	0.11	0.4	5.5	BDL	BDL	0.81	0.22	BDL	BDL	BDL	0.02
	PRW-12	8.1	115	5	BDL	39	372	12	0.6	68	0.06	0.3	7.1	BDL	BDL	1.62	0.07	BDL	BDL	BDL	0.01

Note: All units are in mg/l except pH and colour in colour unit (PR: River; NC: Canal; DP: drain)

Observation based on Interaction with Farmers on river Pilakhar/drains/Canal:

As per the water consent provided by UPPCB under Water (Prevention and Control) Act, 1974, M/s DSM, Meerganj has been authorized to utilize the treated effluent for irrigation/river through drain. The unit has laid about 3 km pipeline of treated sugar effluent from mill up to river Pilakhar via agricultural land of village Sindhauli. Residents of village Sindhauli informed that no treated effluent is provided by the sugar mill through irrigation pipeline and outlets are non-functional. Villagers also complained that the irrigation pipeline carries untreated effluent which is ultimately discharged to the river Pilakhar during every crushing season. However, during the visit outlet of the pipeline (i.e. 100 meters before Pilakhar River) was found covered with sacks, hay/agricultural waste and no discharge of treated/untreated effluent was observed in the river.

Physico-chemical characteristics of river Pilakhar/drains/Canal:

River Pilakhar originates from Bazpur area of Uttarakhand. It is a seasonal river and receives water from local drains, canals and surface runoff during rainy season. The River Pilakhar flows from North to South direction of DSM unit. The closest distance of river Pilakhar to the Unit is 2.5 km north east direction from the Unit. To monitor the river water quality, samples have been taken from river Pilakhar from Lalavpur, UP to Jauner, UP. Samples were also collected from Nahal Canal and River Bhakhra. Based on flow and water quality river Pilakhar was classified into five stretches for the study purpose.

1. Stretch – I - from village Lalavpur, UP to Kemri dam bridge, Rampur Road, UP. Two samples (PRW 1 and 3) were collected from this stretch, which is located in u/s side of the sugar unit. Water flow was observed in this stretch of river. Based on the analysis results of physiochemical parameters in this stretch the quality of river water was found clean as pH was found in the range 8-8.1, BOD 1.3-1.7mg/l & TSS- 40-46mg/l. All heavy metals were below detectable limit except Fe (1.3 to 1.8 mg/l), Mn (0.06 mg/l) and Zn (0.02 mg/l).
2. Stretch – II – from village, Simra Rampur to Zamapur, Rampur. Two samples (PRW 4 and 6) were collected from this stretch, both located in u/s side of the unit. Stagnant water was observed in this stretch. As per primary water quality criteria for bathing water all parameter were well within the limit. All heavy metals were below detectable limit except Fe (1.3 to 1.7 mg/l), Mn (0.08 – 0.1 mg/l) and Zn (0.02 mg/l).
3. Stretch – III – River Pilakhar u/s of Sindhauli, near village Saijna-ki-Gotia to confluence of Nahal canal with river Pilakhar. Three samples (PRW – 8, NCW – 3 and 4) were collected from this stretch, one sample from River Pilakhar and two samples from Nahal canal, all samples located in u/s side from the unit. Water flow was observed in this stretch of river Pilakhar. Stagnant water or dry condition was observed in Nahal canal at NCW-3 and lean flow at NCW-4. The physiochemical water quality parameters in this stretch were found satisfactory. All heavy metals were below detectable limit except Fe (1.1 to 1.84 mg/l), Mn (0.08 – 0.36 mg/l) and Zn (<0.01 mg/l).
4. Stretch – IV – River Pilakhar after confluence with Nahal Canal to before confluence with river Bhakhra. Two river water sample (PRW – 9 and 10) and three drain samples (DPW – 1, 2 and 3) were collected from this stretch.

Drain samples shows high colour (112 – 206 Hazen), COD (252 – 483 mg/l), BOD (127 – 153 mg/l) TSS (89 – 602 mg/l), TDS (860 – 1160 mg/l), Cl (22 – 147 mg/l), Nitrate (2.6 – 9.1 mg/l), ammoniacal nitrogen (44 - 55 mg/l), Fe (6.38 – 36 mg/l) and DO was nil.

The physiochemical water quality parameters in this stretch were found satisfactory. All heavy metals were below detectable limit except Fe (1.8 to 2.53 mg/l), Mn (0.07 – 0.09 mg/l) and Zn (0.02 mg/l).

5. Stretch – V – River Bhakhra before and after confluence of river Pilakhar. Two sample (PRW – 11 and 12) were collected in this stretch, both samples were from d/s side of the unit. After confluence of river Pilakhar high colour and TDS were observed. The physiochemical water quality parameters in this stretch were found satisfactory. All heavy metals were below detectable limit except Fe (0.81 to 1.62 mg/l), Mn (0.07 – 0.22 mg/l) and Zn (0.01 - 0.02 mg/l).

Conclusion of survey conducted in Meerganj:

1. Based on the soil analysis report of 22 samples collected, District Agriculture Department, Bareilly opined that pH of soil samples is normal and values of other parameters are also in range as found in this area.
2. The changes in colour of groundwater to yellow after few minutes of storing might be due to oxidation of iron and manganese present in groundwater. The geology of the area seems to have influence on groundwater parameters.
3. Cases of damage of trees/crop/orchard/garden due to the pollution by DSM Meerganj unit were not reported by concerned district agencies; however, deposition of fly ash/ dust on leaves were observed.
4. Flow in the River Pilakhar was observed in entire stretch. Water quality of river Pilakhar in terms of pH, COD and BOD varies from 8 – 8.1, 5-12 mg/l and BDL – 4 mg/l respectively. Three drains DPW 1, 2 and 3 discharge into stretch IV of river Pilakhar. These drains bring sewage having pH 7.1- 7.3; COD 252 - 483 mg/l; BOD 127 – 153 mg/l; TDS 860 – 1160 mg/l and ammoniacal nitrogen 44-55 mg/l, which shows impact of sewage in River Pilakhar in this stretch.
5. Groundwater samples indicating high values of COD (8 samples: MGW3, MGW4, MGW6, MGW9, MGW16, MGW17, MGW21 and MGW25), Alkalinity (5 samples: MGW3, MGW12, MGW19, MGW25 and MGW30) and TDS (10 samples: MGW3, MGW9, MGW12, MGW15, MGW16, MGW19, MGW25 and MGW30) than WHO prescribed limit were taken from shallow depth of 20-80ft. The locations where higher values of above parameters observed are random in nature and no specific pattern can be identified.
6. Chief Medical Officer, Bareilly vide letter dated 27.12.2021 capitulated that *health surveys of people/locals/villagers living in 08 villages (Sindhauli, Jauner, Khamaraia Sani, Narkhera, Mandanpur, Sahjana, Meerganj, Nagariya Sadat) located in the close vicinity of M/s DSM, Meerganj, District Bareilly (Sugar Unit) was conducted. During survey neither any adverse health impact nor any documented information regarding public health issue was available.* **Annexure-3**
7. Chief Veterinary Officer, Bareilly vide letter dated 17.12.2021 reported that *a survey dated 15.11.2021 and 16.11.2021 along with CPCB, UPPCB and other concerned district departments was conducted in nearby villages of M/s DSM, Meerganj, District Bareilly*

(Sugar Unit) wherein no adverse impact on health of domestic animals was found and no evidence of any factor was observed regarding environmental damage. **Annexure-4**

8. District Pisciculture Officer, Bareilly vide letter dated 17.12.2021 submitted that *in survey dated 15.11.2021 and 16.11.2021, no adverse impact observed due to the industrial pollution on aquatic animals which were found in ponds located in villages nearby to M/s DSM, Meerganj, District Bareilly (Sugar Unit) and Pilakhar river*. **Annexure-5**

Remedial measure for rejuvenation of Pilakhar River

Analysis results of water quality indicates that River Pilakhar is relatively clean in entire stretch. Three drains namely DPW 1, 2 and 3 which discharges untreated sewage into stretch IV of river Pilakhar shall be treated to mitigate the pollution impact of these drains on river Pilakhar water quality. CPCB guideline for "*Alternative treatment technologies for wastewater treatment of drains*" prepared in compliance of Hon'ble NGT direction in the matter of OA no. 06/2012 may be referred for interim measure.

Remedial measure for Groundwater contamination

As per Central Ground Water Board (CGWB), report on National Compilation on Dynamic Groundwater Resource of India, 2020, out of 16 monitored locations, four blocks/ towns of Bareilly fall under semi-critical area and Bareilly city under over-exploited area. As per published research papers (in journals like Pollution Research and Journal of Industrial Pollution Control), alkalinity, heavy metal like As & Fe was found higher than permissible limit suggesting their geogenic origin (Neetu Saxena and Harinder Kaur, 2004; Gaidhane et al., 2017). As per Uttar Pradesh Ground Water Department (UPGWD) on present survey/sampling report no adverse impact of industry in groundwater was found. However, it is recommended to:

1) Identify location of safe drinking groundwater and marking all unsafe groundwater to avoid their use for drinking purposes.
1) 33 groundwater samples were collected from borewell/ handpumps, tubewells around 11 villages. Ground water quality shows higher than WHO permissible limit for **Colour** at Village Nausana, Kulchha Khurd and Vllage Sanjarpur**; COD** at Village Sidhauli, Nagariya kalyanpur, Nagariya Sadat, Nausana, Kulchha Khurd and Sillapur; **TDS** at Village Sidhauli, Jauner, Gula, Nagariya Sadat, Nausana, Kulchha Khurd, Sillapur and Sanjarpur; Alkalinity at Village Sidhauli, Gula, Nausana, Sillapur and Sanjarpur; **Fe** at Village Kulchha Khurd and Sillapur; Mn at Village Kulchha Khurd, Sillapur , Sidhauli, Jauner , Nagariya Sadat and Nausana and **Zn** at Village Sidhauli at shallow depth. These villages need to get deep bore well by the unit or concerned district administration.
2) A detailed study may be carried out for groundwater quality and plan shall be made for recharge of ground water by state government agencies like ground water board or district administration.

Photographs taken during detailed study in Meerganj

Ground water sample from Sillapur Village	Soil Sample collection from Sanjarpur Village, Meerganj
Discharge outlet of irrigation pipeline (lat-28.555307, long-79.241068)	Outlet for treated effluent discharge for irrigation in agriculture fields
Deposition of boiler ash on leaf surface in the field of Sh. Sumeri lal, a farmer and resident of village Sindhauli	Ground water sample in Sindauli village

River pilkhar at Lalavpur, UP	River Pilakhar at U/s of Sindhauli near village Saijna-Ki-Gotia
River Bhakhra after C/F of river Pilakhar at D/s of Jauner village	Nahal (Canal Channel) near Sindhauli bridge before C/f with river Pilakhar
Drain from Sindhauli village near Sindhauli bridge and Chaukidar house	Drain from Sindhauli village near Mathia

6. Joint survey and monitoring in the surrounding areas of M/s Dhampur Sugar Mills Ltd., Asmoli, District Sambhal (Sugar unit) and Sot river on 17.11.2021 & 18.11.2021.

Four teams comprising of officials from CPCB, UPPCB, UPGWB and District administrative officials from Jal Nigam, Agriculture department, Horticulture department carried out survey and monitoring of 17 selected villages around the DSM unit and monitoring of river on 17.11.2021 & 18.11. 2021 to assess the impact on ambient environment. The peripheral area of 5 km was taken for grid sampling with each grid length of 1.25 km, sampling has been done from each grid. Sot river flows from north west (District Amroha) towards the south east (Tahsil Chandausi, district Sambhal). Based on the river catchment of Sot river contour gradient considered from the unit towards the flow direction of river in North- West to South-East direction.

Following 17 villages/ area are included in the study;

1. Village Ramnagar, Block-Asmoli, Dist.- Sambhal, U.P:
2. Village Bilalpat, Block-Asmoli, Dist.- Sambhal, U.P:
3. Village Safat Nagar, Block-Asmoli, Dist.- Sambhal, U.P:
4. Village Khanpur Band, Block-Asmoli, Dist.- Sambhal, U.P:
5. Village Asmoli, Block-Asmoli, Dist.- Sambhal, U.P:
6. Village Ekrotiya, Block-Asmoli, Dist.- Sambhal, U.P:
7. Village Madala Fatepur, Block-Asmoli, Dist.- Sambhal, U.P:
8. Village Rayan Bujurgh Block-Asmoli, Dist.- Sambhal, U.P:
9. Village Burra Begumpur, Block-Asmoli, Dist.- Sambhal, U.P:
10. Village Shahpur Sirpura, Block-Asmoli, Dist.- Sambhal, U.P:
11. Village Dawoi, Block-Asmoli, Dist.- Sambhal, U.P:
12. Village Akbarpur Gahra, Block-Asmoli, Dist.- Sambhal, U.P:
13. Village Dugawar, Block-Asmoli, Dist.- Sambhal, U.P:
14. Village Bela, U.P., Block-Asmoli, Dist.- Sambhal, U.P:
15. Village Heerapur, Block-Asmoli, Dist.- Sambhal, U.P:
16. Village Racheta, Block-Asmoli, Dist.- Sambhal, U.P:
17. Village Chandbar, Block-Asmoli, Dist.- Sambhal, U.P:

6.1. Assessment of contamination of soil

The joint team has surveyed the villages and collected soil samples from those agricultural field locations where the impact of the industrial contamination is expected. District agriculture department collected the soil samples as per protocol. Grid soil sampling was performed to evaluate the soil health in the study area. Total 25 samples were collected from different selected villages. Details of the soil sampling locations are tabled below;

Table 6.1 Description of soil samples collected from Asmoli block

Sample code	Sample location	Coordinate		Remark
		Latitude	Longitude	
ASS 1	Village-Ramnagar	28.702566	78.5572967	Potato
ASS 2	Village-Ramnagar	28.7087780	78.5616952	Ploughed Field
ASS 3	Village-Ramnagar	28.7034628	78.569347	Ploughed Field
ASS 4	Village-Ramnagar	28.7083791	78.552881	Ploughed Field
ASS 5	Village-Ramnagar	28.4158702	78.3320818	Mustard
ASS 6	Village-Bilalpat	28.6992740	78.5711746	Mustard
ASS 7	Village-Safat Nagar	28.703201	78.572769	Ploughed Field
ASS 8	Village-Khanpur Band	28.70206642	78.5473022	Ploughed Field
ASS 9	Village-Khanpur Band	28.6955986	78.549507	Mustard
ASS 10	Village-Khanpur Band	28.6984462	78.5519404	Mustard
ASS 11	Village Asmoli	28.70338821	78.5385055	Mango orchard
ASS 12	Village-Ekrotiya	28.700920	78.514926	Sugarcane
ASS 13	Village Burra Begumpur	28.700441	78.532188	Wheat
ASS 14	Village- Rayan Bujurgh	28.677364	78.516438	Potato
ASS 15	Village-Madala Fatepur	28.671684	78.539028	Potato
ASS 16	Village- Dawoi	28.729348	78.517838	Sugarcane
ASS 17	Village- Shahpur Sirpura	28.721993	78.505062	Sugarcane
ASS 18	Village- Akbarpur Gahra	28.7111403	78.527381	Ploughed Field
ASS 19	Village- Dugawar	28.710341	78.545611	Ploughed Field
ASS 20	Village- Dugawar	28.710026	78.547724	Ploughed Field
ASS 21	Village- Dugawar	28.719952	78.560638	Ploughed Field
ASS 22	Village Bela	28.71533	78.575297	Ploughed Field
ASS 23	Village Heerapur	28.729132	78.556389	Ploughed Field
ASS 24	Village Racheta	28.742234	78.541329	Ploughed Field
ASS 25	Village Chandbal	28.745012	78.536204	Ploughed Field

Location of soil samples collected with respect to the DSM unit are shown in figure below:

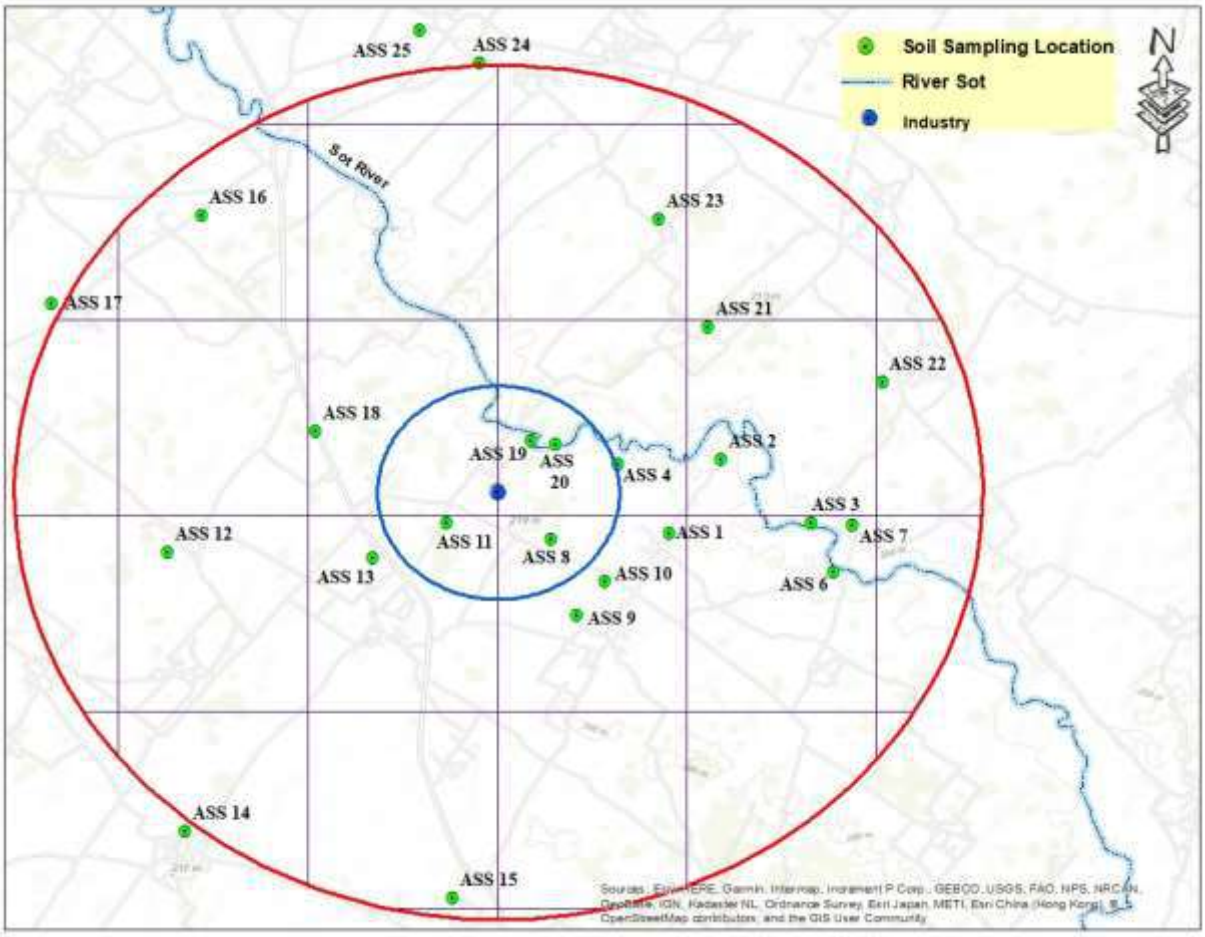


Figure 6.1 Sampling location of soil sample collected in Asmoli, Sambhal

The analysis results of the samples are mentioned below:

Table 6.2 Analysis results of physical parameters and macro-nutrients of soil sample collected from Asmoli block

Sample code	pH	EC	Organic Carbon		Available Nitrogen		Available Phosphorus		Available Potassium	
			(%)	Class	Value	Fertility Class	Value	Fertility Class	Value	Fertility Class
ASS 1	7.4	0.99	**0.28**	L	63	V.L	18	L	430.08	V.H
ASS 2	7.3	**1.51**	**0.28**	L	63	V.L	13.5	V.L	191.52	M.L
ASS 3	7.6	**1.38**	**0.28**	L	63	V.L	22.5	L	268.8	M
ASS 4	7.6	0.39	**0.28**	L	63	V.L	13.5	V.L	203.84	M.L
ASS 5	7.7	**1.07**	**0.28**	L	63	V.L	13.5	V.L	183.68	M.L

ASS 6	7.6	**1.16**	**0.35**	L	78.75	V.L	18	L	136.64	L
ASS 7	7.3	**1.1**	**0.42**	L	94.5	V.L	13.5	V.L	155.68	L
ASS 8	7.2	0.21	**0.28**	L	63	V.L	9	V.L	137.76	L
ASS 9	7.3	0.22	**0.35**	L	78.75	V.L	18	L	441.28	V.H
ASS 10	7.2	0.26	**0.35**	L	78.75	V.L	13.5	V.L	184.8	M.L
ASS 11	7.4	0.23	**0.42**	L	94.5	V.L	18	L	280	M
ASS 12	7.4	0.63	**0.28**	L	63	V.L	18	L	197.12	M.L
ASS 13	7.4	0.7	**0.28**	L	63	V.L	22.5	L	150.08	L
ASS 14	7.4	**1.12**	0.56	M	126	V.L	22.5	L	784	V.H
ASS 15	7.6	0.69	**0.28**	L	63	V.L	13.5	V.L	178.08	L
ASS 16	7.7	0.52	**0.35**	L	78.75	V.L	22.5	L	189.28	M.L
ASS 17	7.2	0.76	**0.35**	L	78.75	V.L	22.5	L	172.48	**L**
ASS 18	7.4	0.6	**0.28**	L	63	V.L	27	L	1120	V.H
ASS 19	7.2	**1.48**	1.19	H	267.75	L	22.5	L	676.48	V.H
ASS 20	7.4	**1.68**	0.98	H	220.5	L	27	L	1120	V.H
ASS 21	7.4	0.71	**0.28**	L	63	V.L	18	L	193.76	M.L
ASS 22	7.7	0.39	**0.35**	L	78.75	V.L	18	L	187.04	M.L
ASS 23	7.3	0.39	**0.21**	L	47.25	V.L	31.5	L	181.44	M.L
ASS 24	7.4	0.51	**0.14**	L	31.5	V.L	18	L	110.88	V.L
ASS 25	7.4	0.54	**0.28**	L	63	V.L	18	L	109.76	V.L

*** L- Low, V.L – very low, M - medium, H – High, M.L – medium low, V.H- very high**

Table 6.3 Analysis results of secondary and micro-nutrient of soil sample collected from Asmoli block

Sample code	Cu	Fe	Mn	Zn	S	Bo
ASS 1	0.24	3.96	3.1	0.89	9.5	0.64
ASS 2	0.4	5.9	3.9	2.6	8.82	0.44
ASS 3	0.34	6.3	3.68	2.31	13.44	0.72
ASS 4	0.25	4.15	3.15	0.75	9.8	0.49
ASS 5	0.34	6.2	3.64	1.18	10.32	0.57
ASS 6	0.38	7.5	4.6	2.13	12.2	0.74

ASS 7	0.44	6.8	4.8	2.17	14.22	0.71
ASS 8	0.49	6.7	5.5	2.5	13.05	0.68
ASS 9	0.31	5.91	2.84	1.44	10.6	0.51
ASS 10	0.45	6.92	5.1	2.94	13.8	0.7
ASS 11	0.36	4	2.9	1.6	11.82	0.56
ASS 12	0.35	6.85	3.8	1.91	12.4	0.56
ASS 13	0.42	7.25	3.81	2.32	13.8	0.6
ASS 14	0.31	6.4	3.35	1.35	12.62	0.59
ASS 15	0.34	6	2.89	1.16	11.75	0.59
ASS 16	0.38	7.02	4	2.39	14.05	0.52
ASS 17	0.3	5.9	3.2	1.74	13.4	0.56
ASS 18	0.36	4.8	4.2	1.5	10.02	0.51
ASS 19	0.23	3.96	3.28	0.96	9.1	0.62
ASS 20	0.31	5.2	2.75	1.03	13	0.4
ASS 21	0.39	6.02	2.86	1.55	12.55	0.46
ASS 22	0.21	5.75	3.4	1.63	11.6	0.61
ASS 23	0.37	4.84	3.7	1.38	12.16	0.65
ASS 24	0.19	3.82	2.98	0.75	9.6	0.6
ASS 25	0.32	5.6	3.6	1.2	11.9	0.77

Note: values of Boron (BO), Zinc (Zn), Copper (Cu), Iron (Fe), Manganese (Mn) and Sulphur (S) are in ppm and values of Nitrogen (N), Phosphorus (P) & Potassium (K) are in kg/hectare. Unit of Electrical conductivity is in deci Seimens per meter (dS m^{-1})

Observation based on the analysis report of soil samples:

As per analysis result of 25 soil samples collected from 17 villages located within 5 km peripheral area around the Unit, following observations were made:

1. pH, Electrical conductivity (EC) and Organic carbon (OC) value ranges from 7.2 - 7.7, 0.21 -1.68 dS m-1 and 0.14 – 1.19 %, respectively.
2. Nitrogen (N), Phosphorus (P), Potassium (K) and Sulphur (S) value ranges from 31.5 – 267.75 kg/hectare, 9.0 – 31.5 kg/hectare, 109.76 – 676.48 kg/hectare and 9.1 – 14.05 ppm, respectively
3. Boron (B), Zinc (Zn), Copper (Cu), Iron (Fe) and Manganese (Mn) value range from 0.4 – 0.77 ppm, 0.75 – 2.94 ppm, 0.19 - 0.49 ppm, 3.82 – 7.5 ppm and 2.86 – 5.5 ppm, respectively.

4. Soil nutrient status data of Asmoli Block, Sambhal district for 2017-18 and 2018-19 under soil health card scheme of Ministry of Agriculture and Farmer Welfare, also shows similar nutrient profile of soils parameters.

6.2. Assessment of contamination of ground water

47 groundwater samples were collected from borewells, hand pumps and tube-wells located in and around 17 villages. All samples were analyzed for general parameters. Analysis of heavy metals were carried out for 35 samples. DSM unit discharge into Sot river, flowing within 100 m distance in south east direction of the unit. Considering the contour gradient of study area towards flow direction of Sot river, villages located at the upstream of DSM unit discharge point may be considered as having less potential of impact of any discharge on ground water and villages located downstream of DSM discharge point may be considered having high potential of ground water contamination due to any discharge from industrial unit. 19 ground water samples were collected from U/s location and 28 were collected from D/s location of discharge point. The groundwater samples were compared with the prescribed specification of ionic concentration in groundwater by WHO standards (1996).

Location of ground water samples collected with respect to the DSM unit are cited in figure 6.2 below:

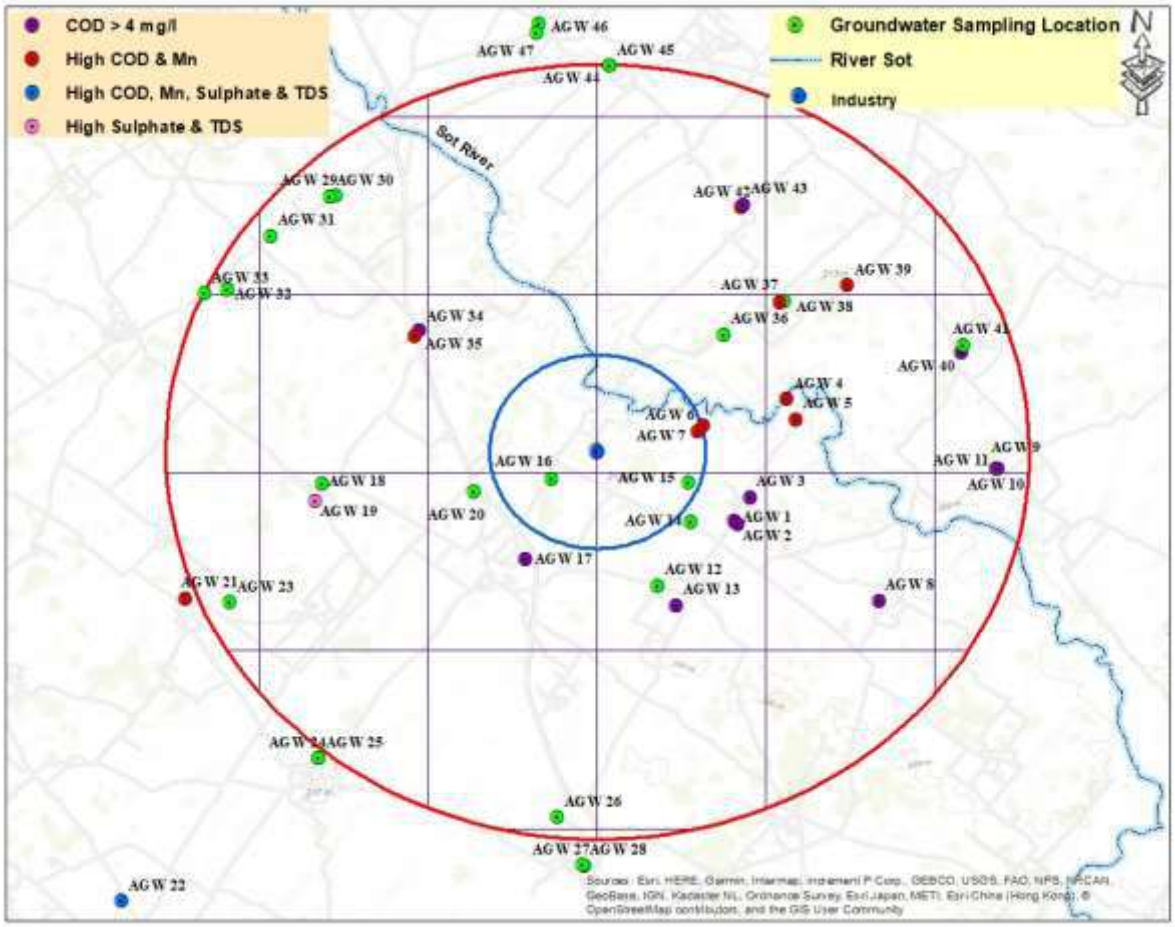


Figure 6.2 Sampling locations of ground water sample collected in Asmoli block

Description of the groundwater sampling locations are mentioned below;

Table 6.4 Details of ground water samples collected from Asmoli block

Sample code	Sample location	Bore well / Handpump	Depth (ft)	MOC of hand pump	Coordinate	
					Latitude	Longitude
AGW 1	Village-Ramnagar	Hand pump	250	GI pipe	28.6994991	78.555770
AGW 2	Village-Ramnagar	Hand pump	80	GI pipe	28.6992054	78.556106
AGW 3	Village-Ramnagar	Hand pump	150	GI pipe	28.7016955	78.557304
AGW 4	Village-Ramnagar	Borewell	220	MS pipe	28.710805	78.560783
AGW 5	Village-Ramnagar	Borewell	200	PVC pipe	28.708942	78.561676
AGW 6	Village-Ramnagar	Borewell	220	PVC pipe	28.708398	78.552879
AGW 7	Village-Ramnagar	Handpump	100	GI pipe	28.707809	78.552307
AGW 8	Village-Bilalpat	Handpump	150	GI pipe	28.692058	78.569534
AGW 9	Village-Bilalpat	Handpump fitted with submersible	200	GI pipe	28.704389	78.580665
AGW 10	Village-Safat Nagar	Handpump fitted with submersible	160	GI pipe	28.704389	78.580665
AGW 11	Village-Safat Nagar	Handpump fitted with submersible	100	GI pipe	28.704395	78.580787
AGW 12	Village-Khanpur Band	Handpump	120	GI pipe	28.693439	78.548515
AGW 13	Village-Khanpur Band	Handpump	105	MS pipe	28.691614	78.550281
AGW 14	Village-Khanpur Band	Borewell	280	GI pipe	28.69939	78.551751
AGW 15	Village Asmoli	Borewell	200	MS pipe	28.703020	78.551490
AGW 16	Village Asmoli	Handpump	Not known	GI pipe	28.703388	78.538505
AGW 17	Village Asmoli	Handpump	85	MS pipe	28.695913	78.536003
AGW 18	Village-Ekrotiya	Hand pump	180	Iron (MS/GI)	28.702931	78.51677
AGW 19	Village-Ekrotiya	Hand pump	90	Iron (MS/GI)	28.70132	78.516069

AGW 20	Village-Ekrotiya	Hand pump	70-72	Iron (MS/GI)	28.702147	78.531123
AGW 21	Village- Burra Begumpur	Hand pump	150	Iron (MS/GI)	28.692259	78.503784
AGW 22	Village- Burra Begumpur	Hand pump	150	Iron (MS/GI)	28.664063	78.497747
AGW 23	Village- Burra Begumpur	Hand pump	140	Iron (MS/GI)	28.691905	78.508045
AGW 24	Village- Rayan Bujurgh	Hand pump	160	Iron (MS/GI)	28.677364	78.516438
AGW 25	Village- Rayan Bujurgh	Hand pump	180	Iron (MS/GI)	28.677366	78.516433
AGW 26	Village-Madala Fatepur	Borewell	160	HDPE	28.671846	78.539018
AGW 27	Village-Madala Fatepur	Hand pump	100	Iron (MS/GI)	28.667357	78.541692
AGW 28	Village-Madala Fatepur	Borewell	80	Iron (MS/GI)	28.667436	78.541418
AGW 29	Village- Dawoi,	Borewell	200	Plastic, HDPE casing	28.729768	78.518062
AGW 30	Village- Dawoi,	Hand pump	95	Iron (MS/GI	28.729716	78.517463
AGW 31	Village- Dawoi,	Hand pump	90	Iron (MS/GI	28.726022	78.511912
AGW 32	Village- Shahpur Sirpura	Borewell	180	HDPE	28.721009	78.507731
AGW 33	Village- Shahpur Sirpura	Hand pump	180	HDPE	28.720672	78.505583
AGW 34	Village- Akbarpur Gahra	Hand pump	120	GI	28.717243	78.525916
AGW 35	Village- Akbarpur Gahra	Hand pump	90	GI	28.716664	78.525532
AGW 36	Village- Dugawar	Hand pump	240	GI	28.716847	78.55483
AGW 37	Village- Dugawar	Hand pump	150	MS	28.719888	78.560612
AGW 38	Village- Dugawar	Hand pump	120	MS	28.719802	78.560151

AGW 39	Village- Dugawar	Hand pump	210	MS	28.721407	78.566486
AGW 40	Village- Bela	Hand pump	220	GI	28.715201	78.577344
AGW 41	Village- Bela	Hand pump	150	MS	28.71579	78.57757
AGW 42	Village- Heerapur	Hand pump	220	GI	28.728683	78.556494
AGW 43	Village- Heerapur	Hand pump	150	MS	28.728947	78.556638
AGW 44	Village- Racheta	Hand pump	150	MS	28.741879	78.544018
AGW 45	Village- Racheta	Hand pump	220	GI	28.741867	78.544002
AGW 46	Village- Chandbar	Hand pump	220	GI	28.745823	78.537321
AGW 47	Village- Chandbar	Hand pump	150	MS	28.744914	78.537108

The Ground water samples were analyses for various physico-chemical parameters as well as for heavy metals with reference to BIS and WHO standards. The analysis results of Groundwater samples for physico-chemical parameters and heavy metals are mentioned in Table 6.4

Table 6.5 Analysis result of ground water samples collected from Asmoli

Sample code	Depth (ft)	pH	TDS	COD	BOD	TSS	Total Alkalinity	Total Hardness	Cl^-	F^-	SO_4^{-2}	NO_3-N	As	Cu	Fe	Mn	Ni	Pb	Zn
WHO Std.			**500**	**4.0**			**30-500**	**250-500**	**100**	**1.5 – 2.4**	**250**	**10-45**	**0.1**		**5.0**	**0.2-0.3**	**0.2**	**0.1**	**2.0**
AGW 1	250	7.3	**742**	**8**	-		**341**	**384**	132	0.3	143	6.3	-	-	-	-	-	-	-
AGW 2	80	7.2	**592**	**7**	-		**368**	**312**	60	0.1	65	**10**	BDL	BDL	**6.3**	0.01	BDL	BDL	0.1
AGW 3	150	7.3	**624**	**8**	-		**341**	**368**	54	0.2	106	**12.2**	-	-	-	-	-	-	-
AGW 4	220	7.5	320	**28**	BDL	38	**205**	**248**	74	0.3	18	0.5	0.01	BDL	**1.87**	**0.62**	BDL	BDL	BDL
AGW 5	200	7.4	356	**24**	**2**	25	**240**	**260**	58	0.2	47	0.5	BDL	BDL	**1.14**	**0.43**	BDL	BDL	BDL
AGW 6	220	7.2	**544**	**45**	**5**	20	**267**	**372**	200	0.2	73	0.6	**0.03**	BDL	**1.4**	**1.15**	BDL	BDL	0
AGW 7	100	7.6	230	**11**	-		167	**220**	16	0.2	73	0.4	**0.02**	BDL	**5.03**	**0.88**	BDL	BDL	0.8
AGW 8	150	7.6	242	**9**	-		**225**	**220**	5	0.4	6	1	BDL	BDL	**1.4**	0.03	BDL	BDL	0.1
AGW 9	200	7.6	226	**7**	-		**205**	**236**	12	0.5	6	BDL	-	-	-	-	-	-	-
AGW 10	160	7.6	242	BDL	-		**217**	**204**	8	0.3	5	0.5	BDL	BDL	0.1	0.09	BDL	BDL	0
AGW 11	100	7.3	452	**7**	-		**349**	**460**	50	0.2	26	4.6	-	-	-	-	-	-	-
AGW 12	120	7.6	342	BDL	-		**527**	**312**	14	0.3	9	BDL	BDL	BDL	**0.81**	**0.18**	BDL	BDL	0.1
AGW 13	105	7.2	**648**	**14**	-		**333**	**340**	82	BDL	24	2.8	BDL	BDL	**1.34**	**0.21**	0.02	BDL	0.2
AGW 14	280	7.6	276	BDL	-		**248**	**276**	16	0.2	7	0.9	BDL	BDL	0.16	0.06	BDL	BDL	BDL

Sample code	Depth (ft)	pH	TDS	COD	BOD	TSS	Total Alkalinity	Total Hardness	Cl^-	F^-	SO_4^{-2}	NO_3-N	As	Cu	Fe	Mn	Ni	Pb	Zn
AGW 15	200	7.5	326	BDL	-		**279**	**300**	12	0.4	26	1.4	-	-	-	-	-	-	-
AGW 16	Not known	7.4	428	2	-		**402**	**300**	18	0.3	17	0.3	BDL	BDL	**1.02**	**0.2**	BDL	BDL	0.1
AGW 17	85	7.3	**550**	**6**	-		**415**	**348**	56	1.2	37	3.8	BDL	BDL	**5.8**	**0.22**	BDL	BDL	0.6
AGW 18	180	7.6	442	BDL	-		**306**	**336**	30	0.3	31	**10.2**	-	-	-	-	-	-	-
AGW 19	90	7.5	**714**	BDL	-		**368**	**504**	108	0.3	**272**	2.1	BDL	**0.08**	**0.9**	**0.22**	BDL	BDL	0.9
AGW 20	70	7.6	304	BDL	-		**252**	**280**	20	0.2	26	7.9	-	-	-	-	-	-	-
AGW 21	150	7.6	470	**6**	3	29	**217**	**356**	35	0.4	247	BDL	0.02	0.82	**107**	**2.56**	**8.1**	**0.4**	**6.7**
AGW 22	150	7.7	**802**	**21**	2	12	**306**	**532**	52	0.4	**456**	0.6	BDL	BDL	**2.87**	**0.83**	BDL	BDL	0.1
AGW 23	140	7.8	348	BDL	-		167	**296**	12	0.2	204	0.3	-	-	-	-	-	-	-
AGW 24	160	7.5	244	BDL	-		194	**256**	15	0.3	13	0.8	-	-	-	-	-	-	-
AGW 25	180	7.3	480	BDL	-		**415**	**296**	42	0.2	32	2.5	BDL	BDL	**2.86**	**0.26**	BDL	BDL	0.4
AGW 26	160	7.6	294	BDL	-		**271**	**336**	16	0.3	27	2.5	-	-	-	-	-	-	-
AGW 27	100	7.2	**876**	BDL	-		**508**	**484**	108	0.3	90	**12.9**	BDL	BDL	0.02	0.14	BDL	BDL	BDL
AGW 28	80	7.3	**724**	BDL	-		**422**	**408**	94	0.2	44	**10.6**	BDL	BDL	**1.22**	**1.19**	BDL	BDL	0.2
AGW 29	200	7.5	226	BDL	-		**225**	**288**	12	0.3	6	0.7	BDL	BDL	**0.75**	**0.28**	BDL	BDL	0.1

Sample code	Depth (ft)	pH	TDS	COD	BOD	TSS	Total Alkalinity	Total Hardness	Cl^-	F^-	SO_4^{-2}	NO_3-N	As	Cu	Fe	Mn	Ni	Pb	Zn
AGW 30	95	7.6	222	BDL	-		**225**	**224**	12	0.2	BDL	BDL	BDL	BDL	**1.45**	0.01	BDL	BDL	3
AGW 31	90	7.2	472	BDL			**364**	**312**	54	0.1	39	2.6	-	-	-	-	-	-	-
AGW 32	180	7.6	226	BDL	-		**202**	**280**	4	0.1	11	BDL	BDL	0.01	**3.81**	**0.22**	BDL	BDL	2.1
AGW 33	180	7.7	204	BDL	-		174	**284**	10	0.3	36	0.3	-	-	-	-	-	-	-
AGW 34	120	7.8	300	**27**	-		**243**	**232**	20	0.2	25	BDL	BDL	BDL	**1.3**	**0.22**	BDL	BDL	0.3
AGW 35	90	7.6	408	**32**	1	12	**279**	**300**	46	0.1	39	BDL	BDL	BDL	**13.1**	**0.68**	BDL	BDL	1.4
AGW 36	240	8	234	**31**	-		174	184	18	0.3	5	BDL	BDL	BDL	BDL	0.07	BDL	BDL	BDL
AGW 37	150	7.8	196	BDL	-		143	148	16	0.1	BDL	0.8	BDL	0.02	**2.56**	**0.22**	BDL	BDL	0.1
AGW 38	120	7.1	**1142**	**72**	-		**465**	**412**	**215**	0.2	208	**12.9**	BDL	BDL	**0.91**	**1.13**	BDL	BDL	0.1
AGW 39	210	7.2	410	**14**	-		**376**	**280**	10	BDL	BDL	1.1	BDL	BDL	**1.86**	**0.43**	BDL	BDL	3.5
AGW 40	220	7.5	452	**31**	-		**366**	**292**	34	0.2	21	3.8	BDL	BDL	**2.58**	**0.14**	BDL	BDL	0.1
AGW 41	150	7.6	458	BDL	-		**395**	**308**	40	0.1	24	1.2	BDL	BDL	**0.67**	**0.37**	BDL	BDL	0.3
AGW 42	220	7.3	**526**	**19**	-		**264**	**304**	64	0.2	34	2.6	BDL	0.01	**3.66**	**0.38**	BDL	BDL	0.1
AGW 43	150	7.4	368	**28**	2	29	**384**	**320**	80	0.1	40	2.7	BDL	BDL	**9.04**	**0.21**	BDL	BDL	2.3
AGW 44	150	7.7	264	**11**	-		**244**	**352**	30	0.1	153	BDL	BDL	BDL	**7.32**	**0.38**	BDL	BDL	0.9

Sample code	Depth (ft)	pH	TDS	COD	BOD	TSS	Total Alkalinity	Total Hardness	Cl^-	F^-	SO_4^{-2}	NO_3-N	As	Cu	Fe	Mn	Ni	Pb	Zn
AGW 45	220	7.4	486	BDL	-		**248**	**312**	20	0.1	14	BDL	0.01	BDL	0.16	0.14	BDL	BDL	0.2
AGW 46	220	7.3	**740**	BDL	-		**368**	**344**	126	0.1	86	5	BDL	0.01	**0.5**	**0.34**	BDL	BDL	0.4
AGW 47	150	7.7	**508**	BDL	-		171	**324**	38	0.2	34	1.2	BDL	BDL	**0.78**	BDL	BDL	BDL	0.6

Note: All units in mg/l except pH and colour; colour measured in colour units

Note: WHO standard values are indicated below the name of the respective parameter. Higher observed values are highlighted.

Observation based on interaction with farmers on ground water:

1. Residents from Ramnagar Village, located at right bank of river Sot, around 1 km D/s direction of DSM unit, raised the issue of ground water pollution and yellow colour in the village and diseases like Jaundice etc. caused due to consumption of polluted/contaminated ground water. Analysis results of seven ground water samples collected from Ramnagar village show TDS in range of 230-742 mg/l, Iron in the range of 1.14-6.30 ppm & Manganese as 0.01-1.15 ppm. COD in the range of 7-45 mg/l is also detected in groundwater samples collected from village indicating the presence of organic matter in the ground water. TDS higher than WHO prescribed limit observed at four locations namely AGW1, 2, 3 & 6. High COD observed in the samples namely AGW 4 (28 mg/l), AGW 5 (24 mg/l) and AGW 6 (45 mg/l) collected at a depth of 200-220 ft. from close proximity of right bank for river Sot indicating the impact of pollution as the Sot River downstream of DSM, Asmoli carries only partially/ untreated effluent and sewage.
2. The groundwater analysis of samples from village Ramnagar indicates higher values of Fe (1.14-6.30ppm) against the permissible 0.3ppm as per drinking water standard ISO:10500 (2012) in all 05 samples analysed for heavy metals. Change in colour of water to yellow might be due to oxidation of iron present in groundwater.
3. No issues related to groundwater contamination raised by residents of villages namely Bilalphat and Safat Nagar, Khanpur Band**,** Ekrotiya, Asmoli, Rayan Bujurgh, Madala Fatepur, Dawoi, Dugawar, Racheta, Chandbar, Bela and Shahpur Sirpura.

Observations based on the analysis results of ground water:

1. All Heavy metals except Fe and Mn are within permissible limits except in the sample collected from village Burra Begumpur at a depth of 150 ft. at location **AGW 21**, which is located at a distance of around 3 km D/s of DSM unit, where BOD (3mg/l), COD (6 mg/l), TSS (29 mg/l), Fe (107 ppm), Mn (2.56 ppm), Ni (8.1 ppm), Pb (0.4 ppm) and Zn (6.7 ppm) higher than WHO prescribed limit were observed. Two samples were also collected from same village at a depth of 150-160 which doesn't show contamination of heavy metal except Fe (2.87 ppm) and Mn (0.83 ppm). Observed high values of heavy metals at location **AGW 21** might be due to the contamination by encasing Iron pipe of handpump.
2. COD (6 mg/l to 72 mg/l) higher than WHO prescribed limit of 4 mg/l were observed in 21 samples collected at a depth of 80-250 ft (7 in upstream and 14 in downstream of the unit).
3. COD (6 mg/l to 72 mg/l) and Mn (0.38 mg/l to 2.56 mg/l) higher than WHO prescribed limit were observed in 11 samples at a depth of 90-220 ft (five in upstream and six in downstream of the unit).
4. Sulphate concentration higher than WHO prescribed limit of 250 mg/l were observed at location AGW 19 (272 mg/l) & AGW 22 (456 mg/l) which are at around 2 and 5 km D/s of DSM unit respectively. Values observed are random in nature and doesn't reflect any pattern of groundwater contamination.

6.3. Assessment of damage to the crop

Observation based on interaction with farmers on crop damage:

1. In Village Akbarpur Gahra, Dugawar, Heerapur farmers informed that the black coloured ash settles down on the leaves of crops and trees and it affects the yield. Villagers also informed that, in the survey area, average yield of sugarcane is 50-60 quintals/bigha, Rice 350-400 quintals/bigha, wheat 2.5-3 quintals/bigha, cauliflower is 8-10 Quintals/bigha and Potato - 25 quintals/bigha.
2. In Village Ramnagar, farmers informed about problem of crop damage due to fly ash deposition.

Observation based on assessment of Horticulture Department:

1. District Horticulture Department, District Sambhal, informed that no adverse effect of M/s Dhampur Sugar Mills Ltd., Asmoli, were reported on the crops.
2. It is concluded based on joint survey conducted district agriculture, horticulture, forest department and interaction with farmer and residents that though there are no evidence of loss of yield or damage to crop, however deposition of fly ash on leaves of crops/orchard and cloths of residents of nearby villages do occur which may cause inconvenience/ uneasiness.

6.4. Survey and monitoring of Sot river

Inspection team has surveyed the Sot river on 17th & 18th of November 2021 and sampling was conducted to assess the impact of Sugar mill effluent on water quality of Sot River. River Sot is a seasonal river which originates from the District Amroha near Dhanaura block. The river has no perennial flow and flow in the river is reported during rainy season and ponding of water takes place after monsoon season on the river bed.

Details of surveyed location are shown in figure 6.3 and 6.4:

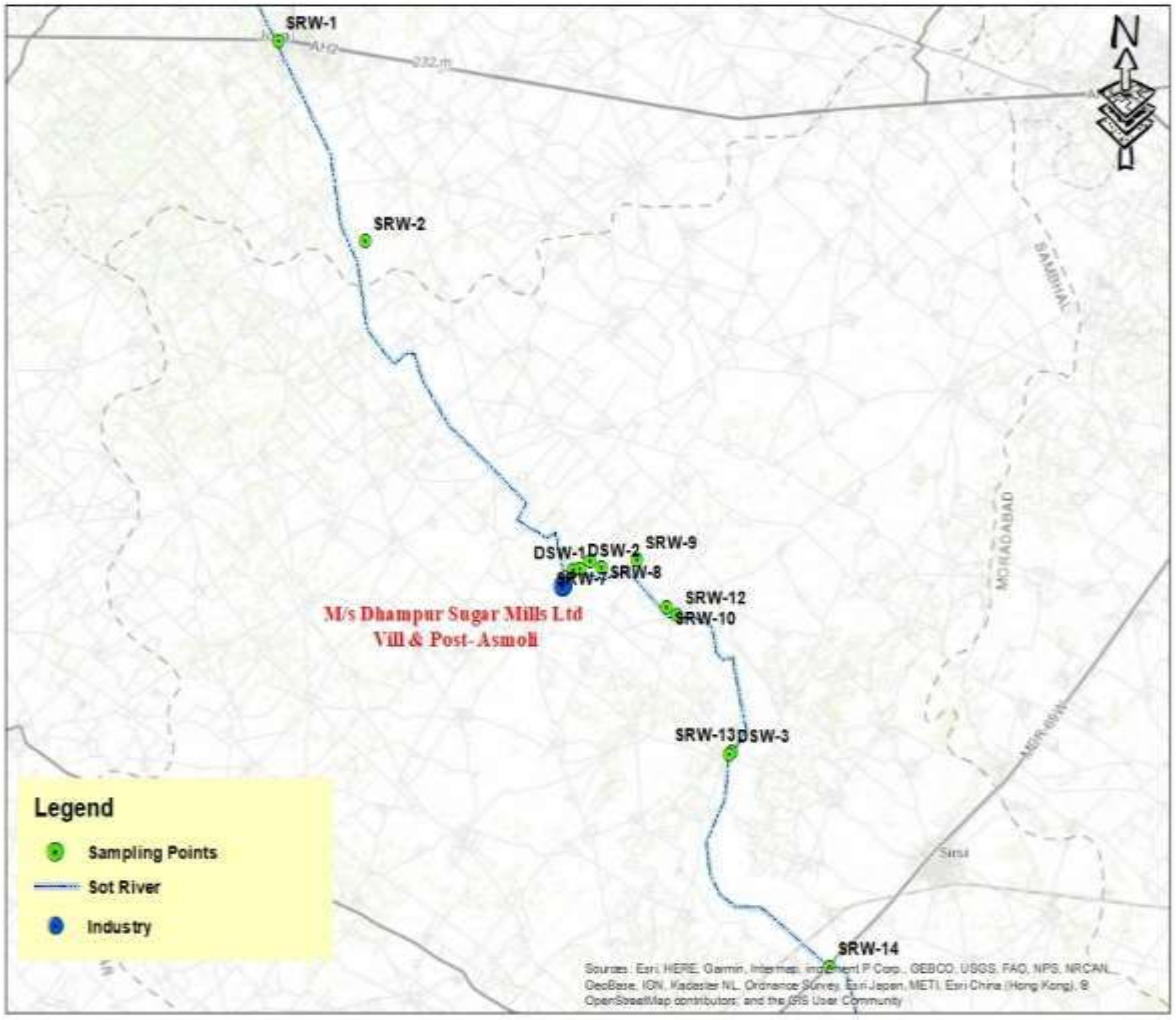


Figure 6.3 Sampling locations of Sot river

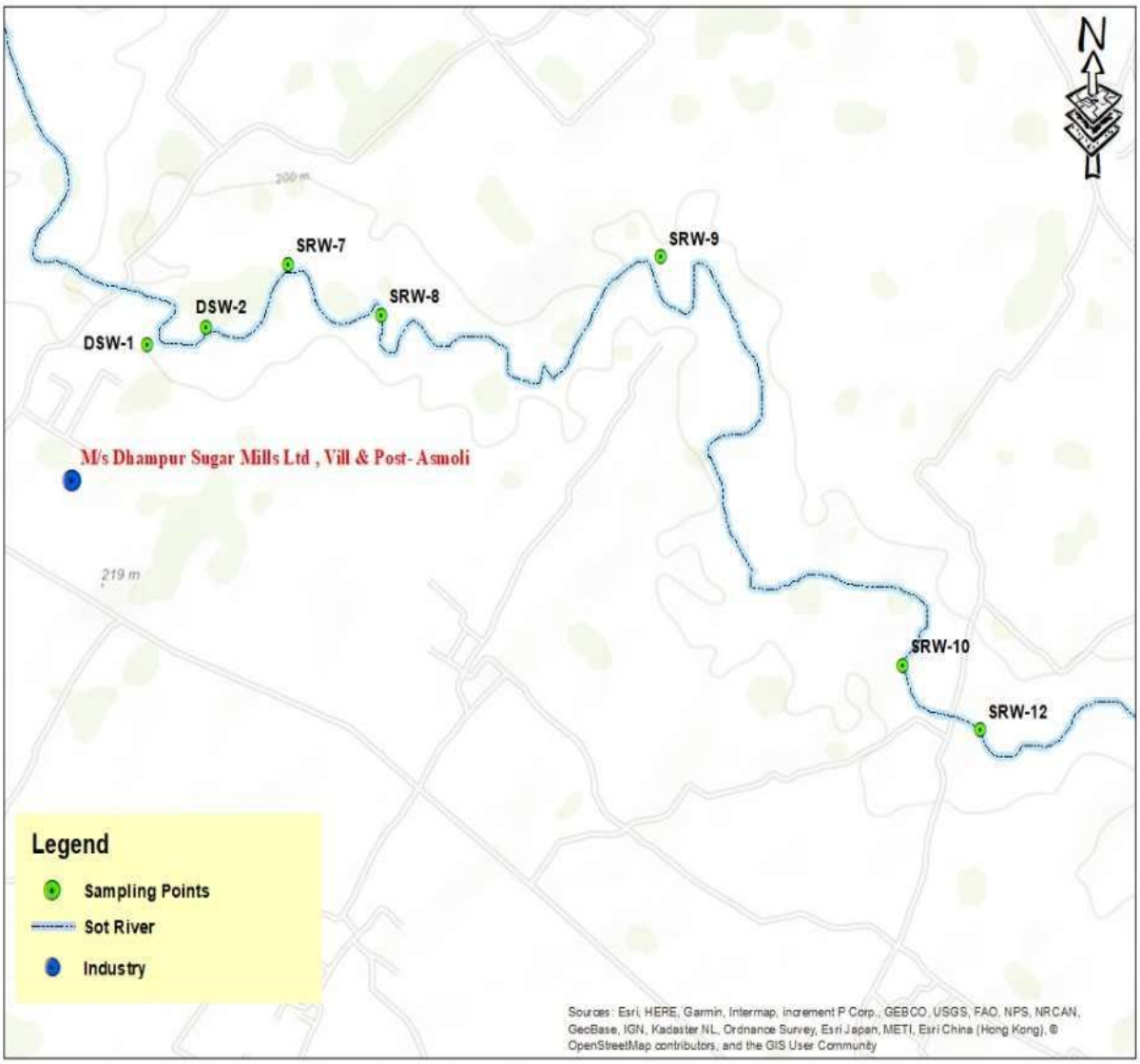


Figure 6.4 Sampling location of Sot river near DSM unit

Details of survey location along with observations for each location is tabled below:

Table 6.6 Details of Sot river surveyed location

Location code	Sampling location	Co-ordinate	Flow condition	Sample taken (Y/N)	Major observation
SRW -1	River Sot at Joya on NH24 road bridge u/s of Asmoli	28.835465, 78.466895	Flowing	Yes	• Flow in river observed at this location and mostly carries sewage from Joya town and nearby areas.

					• Solid waste dumping including medicine packets etc were observed dumped on the river bed.
SRW-2	River Sot near Mojahidpur-Salarpur village (near Palaula)	28.787891, 78.490085	Flowing	Yes	• Water from river Sot at this location was being used for irrigation purpose in nearby agriculture fields and diesel pump observed deployed by villagers for same.
SRW -3	Choiyya river near Salimpur Salar Village (Near Palaula) before c/f with Sot river	28.773817, 78.481337	Dry	No	• River Choiyya (tributary of river sot) at Salimpur Salar was found dry and farming being carried out on river bed. • Choiya river confluences with river Sot d/s of this location.
SRW-4	River Sot behind Bharat Petrol Pump near Manouta road on Sambhal-Joya Road u/s of Manouta bridge	28.73899, 78.52278	Dry	No	• River bed was found dry
SRW-5	River Sot at Manouta road bridge u/s of Asmoli on Sambhal-Joya Road	28.735449, 78.523976	Dry	No	• River Sot was found dry at immediate upstream and downstream to the Manouta bridge location which is located at around 5 Km upstream to the DSM Unit at Asmoli.
SRW-6	River Sot on Asmoli Madhan Road near Akbarpur Gohra u/s of DSM Unit Asmoli	28.7109541, 78.5437542	Dry	No	• River Sot on Asmoli-Madhan road near the DSM unit boundary was found dry on the culvert. • Ploughing of river bed observed behind the unit boundary for farming.

SRW-7	River Sot Near Asmoli Shamshan Ghat d/s of DSM unit	28.71199, 78.55002	Flowing	Yes	• The river bed at the location behind the DSM Asmoli unit, near Asmoli Shamshan Ghat was found dry with small patches of water. • Flow in river observed through a closed pipeline at this location near river boundry. • River at this location is largely fed with the wastewater coming from the mill as well as storm water during rain. • River bed observed dark-brown in colour.
SRW-8	River Sot near Dugawar Village d/s of DSM unit at Asmoli	28.710578, 78.553164	Flowing (meagre)	Yes	• River Sot at downstream of Asmoli Shamshan Ghat near Dugawar village found to have pooling of wastewater. • Physical appearance of river water was black coloured with dark background of river bed.
SRW-9	River Sot near Dugawar Shamshan Ghat	28.712195, 78.562499	Stagnancy observed (suspended ash)	Yes	• River Sot at near Dugawar Shamshan Ghat was observed to be having in the form of pool and no flow observed at the location. • River water observed blackish in color. • Suspended matter (ash like) was observed in sample collected.
SRW-10	River Sot near Bilal Pat village before diversion through pipeline near Karbala	28.70086, 78.57057	Flow to pipeline	Yes	• The river at this location was found diverted through a pipeline for an approximate distance of 300-400 meters.

SRW-11	River Sot near Bilal Pat-Ramnagar village road	28.699514, 78.572181	Dry	No	• River bed was found dry.
SRW-12	River Sot through pipeline observed near Bilal Pat	28.699059, 78.573172	Flow from pipe	Yes	• Flow observed at this location. • The colour of the sample visually appeared as brown at this location.
SRW-13	River Sot at Shahpur Sot village d/s of village	28.666493, 78.58772	Pooling observed (no flow d/s)	Yes	• Pooling of river Sot was observed at this location. Aquatic organism like fish also observed.
SRW-14	Road near Firozpur village - Sirsi	28.615644, 78.613987	Stagnant pockets	Yes	• Pooling of river Sot was observed at this location with green algae indicating stagnancy of water.
SRW-15	River Sot on Sambhal-Chandausi Road near Tigri village on Bhawanipur Pul (d/s of Sambhal town)	28.567729, 78.646872	Dry	No	• River bed at this location was observed as dry.
Sampling details of drains discharge into Sot river					
DSW-1	Outlet Drain coming from DSM unit near the boundary of DSM residential quarter	28.7097494, 78.5453367	Flowing	Yes	• Drain contains the discharge from residential area of DSM unit. • Drain joins the Sot river flow route at around 100-meter d/s of the location.
DSW-2	Drain from DSM unit u/s to Asmoli Shamshan Ghat (Near	28.710228, 78.547275	Flowing	Yes	• This drain contains the discharge of treated effluent from ETP of DSM unit.

	JCB work observed for pipeline)				• The work for pipeline implant was going on at the location on the edge of river bed downstream to this location.
DSW-3	Drain from Village Shahpur Sot before c/f with River Sot	28.666074, 78.587211	Flowing drain	Yes	• The domestic waste water from village reaches through the drain.

Analysis results of sample collected during survey and monitoring of Sot river for general parameters is tabled below;

Table 6.7 Analysis results of sample collected from Sot river and drains

Stretch	Location code	pH	COD	BOD	TSS	TDS	Colour	Cl-	NO_3-N	$SO4^{2-}$	PO_4-P	NH_3-N	DO	As	Cu	Fe	Mn	Zn
	Survey location of Sot river upstream of Dhampur sugar mill (Stretch-I)																	
Stretch - I	SRW-1	7.3	18	4	14	200	33	50	0.11	37	1.23	2	0	BDL	BDL	0.4	0.17	0.02
	SRW-2	7.4	32	7	14	236	29	56	0.46	38	0.14	6	0	BDL	BDL	0.91	0.21	BDL
Stretch - II	Sot River was found dry in this stretch, no sample was collected																	
	Survey location of Sot river downstream of Dhampur sugar mill (Stretch-III)																	
Stretch - III	SRW-7	6.8	46	14	52	108	11	71	0.32	146	0.16	1	0	BDL	0.03	3.36	0.21	0.14
	SRW-8	6.9	132	17	223	364	8	85	0.1	105	0.14	3	0	BDL	0.03	4.66	0.25	0.08
	SRW-9	6.8	**228**	**126**	**590**	460	20	104	0.1	96	0.14	6	0	BDL	BDL	2.55	0.41	0.03
	SRW-10	7.4	66	12	11	592	81	133	0.1	74	0.61	-	1.7					
	SRW-12	7.4	60	12	13	896	61	119	0.1	102	0.52	3	1.9	BDL	BDL	0.35	0.34	BDL
	SRW-13	7.5	29	7	22	128	28	13	BDL	26	0.52	2	5.2	BDL	BDL	1.68	0.15	0.02
	SRW-14	7.5	12	3	13	128	44	34	0.36	32	0.05	1	4.4	0.32	BDL	2.85	0.43	0.03
	DSW-1	7.3	72	24	19	716	34	221	0.1	158	BDL	2	-	BDL	BDL	0.06	0.08	BDL
	DSW-2	7.3	106	24	40	648	19	161	BDL	136	0.1	-	-					
	DSW-3	7.2	92	32	77	244	48	62	0.49	71	0.74	7	-	BDL	0.01	2.2	0.41	0.09

Note: All units in mg/l except pH and colour; colour measured in colour units (SR: River; DS: drain)

Physico-chemical characteristics of river Sot/drains

Sampling of river Sot was conducted from Joya town (upstream of DSM unit) to Tigri village located at around 10 km. downstream of DSM unit in District Sambhal. Based on the flow conditions Sot river can be divided into 3 stretches;

Stretch – I: From Joya to Mojahidpur. Flow in river observed in this stretch which is due to discharge of sewage from Joya town and nearby areas. River water quality in this stretch show pH values from 7.3 to 7.4, colour from 29 to 33 colour unit, BOD from 4 to 7 mg/l, COD from 18 to 32 mg/l, TSS 14 mg/l, TDS from 200 to 236 mg/l, Sulphate from 37 to 38 mg/l, nitrate from 0.11 to 0.46 mg/l and ammoniacal nitrogen from 2 to 6 mg/l.

Stretch – II: From Mojahidpur downstream to upstream of DSM unit at Asmoli. River Sot was found dry in this stretch.

Stretch – III: From downstream of DSM unit to Tigri village. No fresh water flow in river was observed in this stretch and river receives treated effluent from ETP lagoon of sugar unit, sewage from residential colony of DSM sugar unit and sewage from Sahpur village which contribute to its flow for few kilometers. River water quality in this stretch show pH values from 6.8 to 7.5, colour from 08 to 81 colour unit, BOD from 3 to 126 mg/l, COD from 12 to 228 mg/l, TSS 11 to 590 mg/l, TDS from 108 to 896 mg/l, Sulphate from 26 to 146 mg/l, nitrate BDL to 0.36 mg/l and ammoniacal nitrogen from 1 to 6 mg/l which indicate that river is polluted as it carries effluent and sewage. The work for pipeline laying was observed D/s of the unit at the time of inspection for release of treated industrial effluent in the agricultural field.

<u>Conclusion of survey conducted in Asmoli, District Sambhal</u>

1. Based on the soil analysis report pH of soil samples was normal and values of other parameters were also in range as found in this locality.
2. The changes in colour of groundwater water to yellow after few minutes of storing might be due to oxidation of iron and manganese present in groundwater. The geology of the area seems to have influence on groundwater parameters.
3. Evidence has not been found of damage to trees/crop/orchard/garden and fish breeding due to the pollution by DSM Asmoli unit.
4. River Sot in stretch – II, from Mojahidpur downstream to upstream of DSM unit at Asmoli, River Sot was found dry. In stretch – III, from downstream of DSM unit to Tigri village, river is polluted as it doesn't have any fresh water source and carries effluent from DSM, Asmoli unit and sewage from residential colony of the unit and nearby villages.
5. In Ramnagar village located on right bank of river d/s of DSM Asmoli unit, pollution on ground water samples even at a depth of 200-220 ft. was observed in terms of high values of COD (11-45mg/l).
6. Ground Water Department, District- Moradabad, vide letter dated 29.12.2021 reported that, *block-Asmoli was notified as semi-critical zone and provided the 05-year pre-& post monsoon ground water level data of Asmoli block i.e. average 17.34 meter* (**Annexure-8A).** Ground Water Department, District- Moradabad, vide letter dated 05.05.2022 reported following observations (**Annexure 8B**):
    a. *It was further noted that at sampling locations having higher concentration of COD along with chloride and Mn was also observed. Chloride is often the most serious*

source of interference in COD determination. This indicates the possible impact of industrial pollution or domestic wastewater as the Sot River downstream of DSM, Asmoli carries only partially/ untreated effluent and sewage. As reported by the villagers the cases of Jaundice are of concern, however the cause of this possibly is drinking water contaminated with Hepatitis virus which is unlikely to due to industrial discharge.

b. *The changes in colour of groundwater water to yellow after few minutes of storing might be due to oxidation of iron and manganese present in groundwater. The sources of these pollutants seem to be geogenic in origin. The geology of the area seems to have influence on groundwater parameters. The COD values also possibly get influenced by higher concentration of chloride and Mn concentrations. Further, the excessive use of pesticides and fertilizers in the area coupled with overexploitation of the ground water also may have contributed to the higher values of COD and Ammoniacal nitrogen.*

7. District Horticulture Officer, Asmoli, Sambhal informed that, *there is 600-700-hectare area for horticulture and 500-600-hectare area for vegetable cultivation is available in block Asmoli. Following crops are reported which are cultivated in 5-kilometer radius of M/s DSM, Asmoli: Potato (400-450 hectare), vegetable (20 hectare), Mango (63 hectare) and Guava (3.2 hectare). No adverse effect of industrial pollution (emission) occur on mango crop vegetable and potato crop. It is also reported that no complaint regarding above issues are received by the farmers of block Asmoli.* **Annexure-9**
8. District Pisciculture Officer, Asmoli, Sambhal vide letter dated 29.12.2021 submitted that*, in survey dated 17.11.2021 and 18.11.2021, no adverse impact observed due to the industrial pollution on pisciculture which were present in ponds located in the closed vicinity of M/s DSM, Asmoli and no complaint related to pisciculture against sugar mill was received.* **Annexure-10**

Remedial measure for rejuvenation of Sot River

Analysis results of water quality of Sot river in stretch- III down stream of DSM unit indicates that river water is polluted due to lack of any fresh water source. It carries effluent from DSM, Asmoli unit and sewage from residential colony of the unit and nearby villages. Ground water sample taken in this stretch located on right bank of river d/s of DSM unit reflect pollution on ground water in terms of high values of COD (11-45mg/l). No untreated effluent and sewage should be discharge into river. CPCB guideline for "*Alternative treatment technologies for wastewater treatment of drains*" prepared in compliance of Hon'ble NGT direction in the matter of OA no. 06/2012 may be referred for interim measure. Cost of the treatment system generally varies between 50 lacs to 1 crore per unit which shall be bear by either DSM unit or by other concern authority or both. The length of Constructed Wetland (CWS) and number of units depends on the flow of water, wastewater quality (BOD, COD, TSS and DO levels) and width of the drain. These systems can be installed and operated within short gestation period of around 12 - 24 months and not only treat the wastewater but also help in recharging of ground water. For designing of such system, expert institute like Centre for Environmental Management of Degraded Ecosystem (CEMDE), University of Delhi may also be approached for better technical know-how about the natural treatment system.

Remedial measure for Groundwater contamination

As per Central Ground Water Board (CGWB), report on National Compilation on Dynamic Groundwater Resource of India, 2020, out of 8 monitored locations, two blocks/ towns of Sambhal fall under semi-critical area, and five blocks/ towns under critical area. As per Uttar Pradesh Ground Water Department (UPGWD) on present survey/sampling report no adverse impact of industry in groundwater was found. However, it is recommended to:

1) Identify location of safe drinking groundwater and marking all unsafe groundwater to avoid their use for drinking purposes.
2) 47 groundwater samples were collected from borewells, hand pumps and tube-wells located in and around 17 villages. Out of these 17 villages ground water quality shows higher than WHO permissible limit for **TDS** at Village Ramnagar, Khanpur Band, Asmoli, Ekrotiya, Burra Begumpur, Madala Fatepur, Dugawar, Heerapur and Chandbar; **COD** at Ramnagar, Bilalpat, Safat Nagar, Khanpur Band, Asmoli, Burra Begumpur, Akbarpur Gahra, Dugawar, Bela, Heerapur and Racheta; **alkalinity** at Village Khanpur Band and Madala Fatepur; **Fe** at Village Ramnagar, Asmoli, Burra Begumpur, Akbarpur Gahra, Heerapur and Racheta; **Mn** at Village Ramnagar, Burra Begumpur, Madala Fatepur, Akbarpur Gahra, Dugawar, Bela, Heerapur, Racheta and Chandbar and **Zn** at Village Burra Begumpur at shallow depth. These villages need to get deep bore well/handpump by the unit or by concerned agencies.
3) A detailed study may be carried out for groundwater quality and plan shall be made for recharge of ground water by central and state government agencies like Central ground water board or concerned agencies.

Photographs taken during detailed study in Asmoli, Sambhal

Ground water sample collection in Erkotiya village	Ground water sample collection in Asmoli village

Soil sample collection in Asmoli village	Soil sample collection in Rushtampur village
GW sample collection in Ramnagar village near Sot river	GW sample collection in Ramnagar village near Sot river
River Sot at Joya on NH24 road bridge u/s of Asmoli	River Sot on Asmoli Madhan Road near Akbarpur Gohra u/s of DSM Unit Asmoli

Outlet Drain coming from DSM unit near the boundary of DSM residential quarter	River Sot near Dugawar Village d/s of DSM unit at Asmoli
Drain from Village Shahpur Sot before c/f with River Sot	River Sot on Sambhal-Chandausi Road near Tigri village on BhawanipurPul (d/s of Sambhal)

7. Joint survey and monitoring in the surrounding areas of M/s Dhampur Sugar Mills Ltd., Dhampur, District Bijnor (Sugar and Distillery unit) and Ikra Drain & Karula river during Dec. 1-2, 2021

Four teams comprising of officials from CPCB, UPPCB, UPGWB and District administrations, were deputed to carry out survey and monitoring on 01.12.21 & 02.12.21 to assess the damage caused to the environment of 21 selected villages/areas around the DSM unit and Ikra drain. The peripheral area of 4 km was taken for grid sampling with each grid length of 1.5 km, sampling has been done from each grid. The unit is located in between SH-49 and Ikra drain. Ikra drain flows north to south direction parallel to Karula River till Kiwar village, Dhampur, Bijnor, UP where it discharges into Karula river around 20 km south of the Unit. Based on the river catchment of Karula river and Ikra drain contour gradient considered from the unit towards flow direction of river and drain in North to South direction of the unit.

Following 21 villages/ area are included in the survey;

1. Village Peepla (Saidpur Veeru), Block-Dhampur, Dist- Bijnaur, U.P
2. Village Haizri (Nurrullapur Cheema), Block-Dhampur, Dist- Bijnaur, U.P
3. Village Mauhdi, Block-Dhampur, Dist- Bijnaur, U.P
4. Village kundipura, Block-Dhampur, Dist- Bijnaur, U.P
5. Village Mirjapur Palla, Block-Dhampur, Dist- Bijnaur, U.P
6. Village Mohda, Block-Dhampur, Dist- Bijnaur, U.P
7. Village Khai khera, Block-Dhampur, Dist- Bijnaur, U.P
8. Village Jaitra, Block-Dhampur, Dist- Bijnaur, U.P
9. City area Dhampur Dist- Bijnaur, U.P
10. Dhampur Hussainpur/Purana Dhampur, Dist- Bijnaur, U.P
11. Village Suhaghpur Block-Dhampur, Dist- Bijnaur, U.P
12. Village Rampur Bhola, Block-Dhampur, Dist- Bijnaur, U.P
13. Village Dittanpur, Block-Dhampur, Dist- Bijnaur, U.P
14. Village Alaipur, Block-Dhampur, Dist- Bijnaur, U.P
15. Village Alavalpur, Block-Dhampur, Dist- Bijnaur, U.P
16. Village- Wajidpur, Block-Dhampur, Dist- Bijnaur, U.P.
17. Village- Mohammad Alipur Bhikan, Block-Dhampur, Dist- Bijnaur, U.P.
18. Village- Nindru Khas, Block-Dhampur, Dist- Bijnor, U.P.
19. Village- Khujista Nagar, Block-Dhampur, Dist- Bijnor, U.P.
20. Village- Ajitpurdasi, Block-Dhampur, Dist- Bijnor, U.P.
21. Village- Naseerpur Banwari, Block-Dhampur, Dist- Bijnor, U.P.

7.1. Assessment of contamination of soil

29 soil samples were collected from 21 selected villages existing in 4 Km peripheral area around the DSM unit to assess the soil health with respect to pH, EC, organic carbon, available phosphate and available potash.

The location of soil samples collected with reference to the DSM unit is shown as figure 7.1:

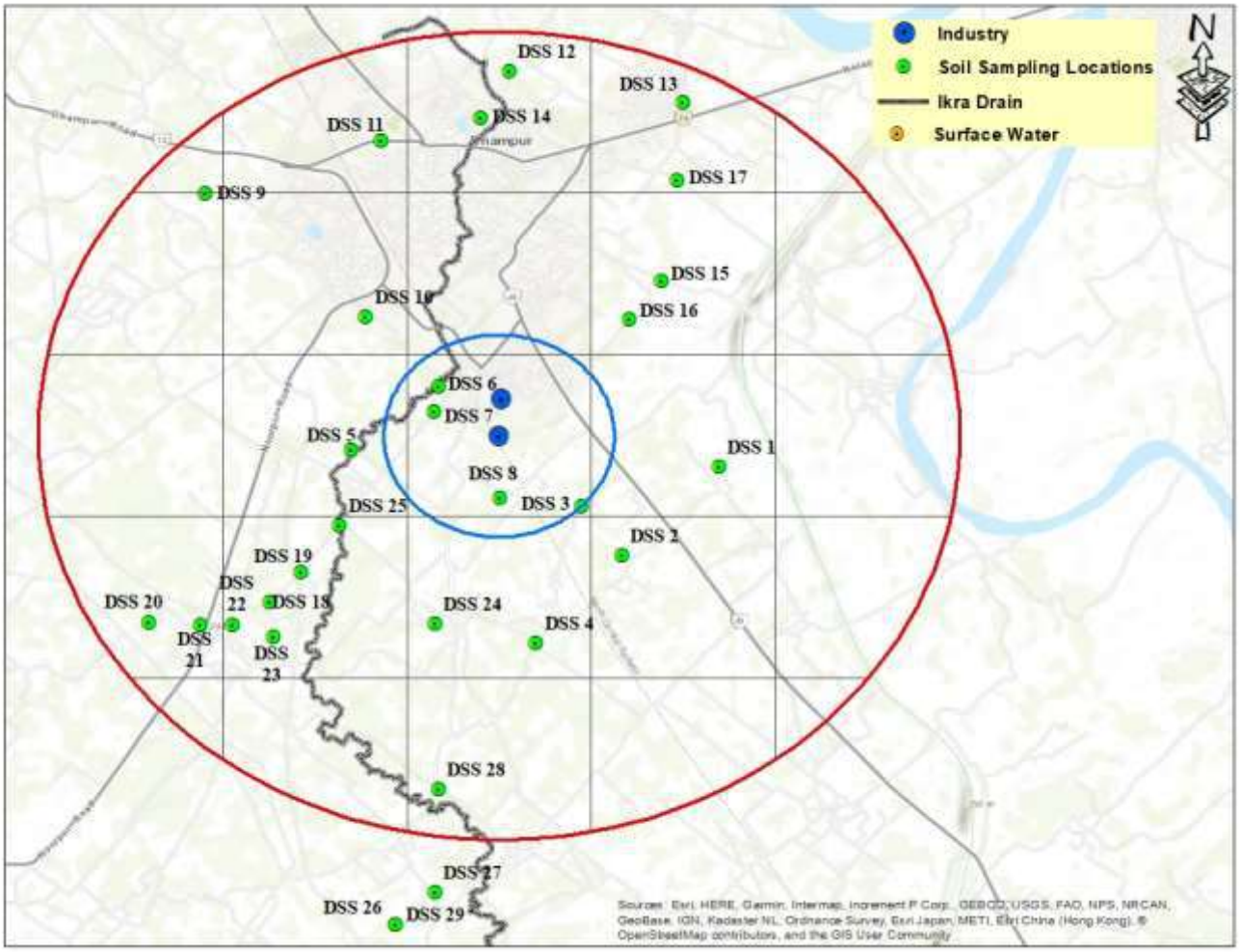


Figure 7.1 Soil sampling locations collected at Dhampur, Bijnor

Details of soil sample collected from 29 locations is tabled below;

Table 7.1 Details of soil samples collected from Dhampur block

Sample code	Sample location	Coordinate		Remark
		Latitude	Longitude	
DSS 1	Village Peepla (Saidpur Biro	29.282534	78.533764	Drain near the agricultural field of Sh. Lakshman Singh carry waste water and solid wastes in to the fields during rain, which affect the crop productivity.

Sample code	Sample location	Coordinate		Remark
		Latitude	Longitude	
DSS 2	Village Haizri (Nurrullapur Cheema)	29.274592	78.525038	Ploughed field
DSS 3	Village Mauhdi	29.279016	78.521434	Ploughed field
DSS 4	Village Kundipura	29.2667800	78.5174263	Ploughed field
DSS 5	Village Mirjapur Palla	29.284023	78.500944	Ploughed field
DSS 6	Village Mirjapur Palla	29.287585	78.508913	Mango orchard
DSS 7	Village Mohda	29.289683	78.508763	Ploughed field
DSS 8	Village Mohda	29.279799	78.514219	Ploughed field
DSS 9	Village Khai khera	29.306907	78.487825	Ploughed field
DSS 10	Jaitra	29.295933	78.502241	Ploughed field
DSS 11	Dhampur	29.311646	78.503618	Plough field
DSS 12	Village-Dhampur Hussainpur	29.317875	78.515049	Plough field
DSS 13	Village- Suhaghpur	29.315095	78.530566	Plough field
DSS 14	Village- Rampur Bhola	29.313641	78.512505	Potato field
DSS 15	Village- Dittanpur	29.299123	78.5286	Plough field
DSS 16	Village- Alaipur	29.295665	78.525726	Plough field
DSS 17	Village- Alavalpur	29.308074	78.530051	Plough field
DSS 18	Village- Wajidpur	29.270428	78.493618	Sugarcane field
DSS 19	Village- Wajidpur	29.273118	78.496383	Sugarcane field
DSS 20	Village- Mohammad Alipur Bhikan	29.268675	78.4828262	Sugarcane/Mustard
DSS 21	Village- Mohammad Alipur Bhikan	29.26846	78.487448	Sugarcane/Mustard
DSS 22	Village- Nindru Khas	29.268386	78.490289	Mustard
DSS 23	Village- Nindru Khas	29.26735877	78.49394226	Garlic
DSS 24	Village- Khujista Nagar	29.268493	78.508359	Sugarcane/Mustard

Sample code	Sample location	Coordinate		Remark
		Latitude	Longitude	
DSS 25	Village- Khujista Nagar	29.277284	78.499880	Sugarcane/Mustard
DSS 26	Village- Ajitpurdasi	29.241724	78.504849	Plough field
DSS 27	Village- Ajitpurdasi	29.244529	78.5084	Plough field
DSS 28	Village- Naseerpur banwari	29.253791	78.508727	Plough field
DSS 29	Village- Naseerpur banwari	29.241714	78.504849	Plough field

Analysis results of soil samples collected is tabled below:

Table 7.2 Analysis results of soil samples

Soil Sample code	pH	Available Organic Carbon		Available Phosphate		Available Potash		Electrical Conductivity	
		%	Fertility Class	%	Fertility Class	%	Fertility Class	Milli mhos/cm.	Class
DSS 1	7.6	0.35	L	27	M	209.44	M	0.35	Normal
DSS 2	7.5	0.56	M	27	M	179.2	M	0.56	Normal
DSS 3	7	0.21	L	9	V.L	143.36	M	0.45	Normal
DSS 4	7.4	0.07	V.L	13.5	L	168	M	0.55	Normal
DSS 5	7.1	0.63	M	40.5	H	434.56	H	0.4	Normal
DSS 6	7.3	0.84	H	67.5	H	553.28	H	0.46	Normal
DSS 7	7.5	0.28	L	13.5	V.L	115.36	M	0.53	Normal
DSS 8	7.2	0.35	L	13.5	L	143.36	M	0.49	Normal
DSS 9	7.2	0.28	L	22.5	M	129.92	M	0.33	Normal
DSS 10	7.4	0.14	V.L	9	V.L	88.48	L	0.43	Normal
DSS 11	7.2	0.41	L	36	M	204.96	M	0.48	Normal
DSS 12	7.2	0.38	L	31.5	M	126.56	M	0.46	Normal
DSS 13	7.7	0.67	M	45	H	173.6	M	0.54	Normal
DSS 14	7.1	0.31	L	18	L	170.2	M	0.34	Normal
DSS 15	7.1	0.14	V.L	13.5	H	209.44	M	0.43	Normal

Soil Sample code	pH	Available Organic Carbon		Available Phosphate		Available Potash		Electrical Conductivity	
		%	Fertility Class	%	Fertility Class	%	Fertility Class	Milli mhos/cm.	Class
DSS 16	7.3	0.53	M	27	M	116.48	M	0.37	Normal
DSS 17	7.4	0.28	L	40.5	H	92.96	L	0.41	Normal
DSS 18	7	0.28	L	13.5	L	234.08	M	0.42	Normal
DSS 19	7.1	0.25	L	4.5	V.L	119.84	M	0.35	Normal
DSS 20	7.2	0.21	L	4.5	V.L	157.92	L	0.42	Normal
DSS 21	7.1	0.48	**L**	9	V.L	412.16	H	0.34	Normal
DSS 22	7	0.56	M	9	V.L	400.96	H	0.31	Normal
DSS 23	7.7	0.56	M	27	M	143.36	M	0.33	Normal
DSS 24	7.2	0.49	L	9	V.L	145.6	M	0.42	Normal
DSS 25	6.9	0.24	L	22.5	M	230.72	M	0.37	Normal
DSS 26	7	0.35	L	18	L	439.04	H	0.41	Normal
DSS 27	7.2	0.28	L	18	L	155.68	M	0.32	Normal
DSS 28	6.9	0.21	L	9	V.L	394.24	H	0.34	Normal
DSS 29	7.3	0.29	L	9	V.L	203.84	M	0.35	Normal

*** L- Low, M - medium, S – small, V.L – very low**

Observations based on the analysis results of soil samples:

As per analysis result of 29 soil samples collected from 21 villages located within 4 km peripheral area around the Unit, following observations were made:

1. pH, Organic Carbon (OC), Potassium (K), Phosphate and Electrical Conductivity (EC) value ranges from 6.9- 7.6, 0.14-0.84 %, 92-553.28 %, 9 - 45 %, and 0.31 – 0.56Milli mhos/cm respectively
2. Soil nutrient status data of Dhampur Block of district Bijnor for 2017-18 and 2018-19 under soil health card scheme of Ministry of Agriculture and Farmer Welfare, also shows similar pattern of nutrient profile of soils parameters.

7.2. Assessment of contamination of ground water

53 groundwater sample were collected from 29 village. All samples were analysed for general parameter and analysis for heavy metals were carried out for 37 samples. Ikra drain flows west of the DSM unit and Preshak canal flows east of DSM unit around 2 Km from the unit. Both Ikra drain and Preshak canal flows from north to south. Considering contour gradient of the study area towards flow direction from north to south, villages/locations located at the

upstream of DSM unit may be considered as having less potential of impact of any discharge on ground water and villages located downstream of DSM discharge point may be considered having high potential of ground water contamination due to any discharge from industrial unit. 26 groundwater samples were collected from u/s locations and 27 groundwater samples were collected from d/s locations. The groundwater sample were compared with prescribed specification of ionic concentration in groundwater by WHO standards (1996).

The location of ground water and surface water sample collected with reference to the DSM unit is shown as figure 7.2:

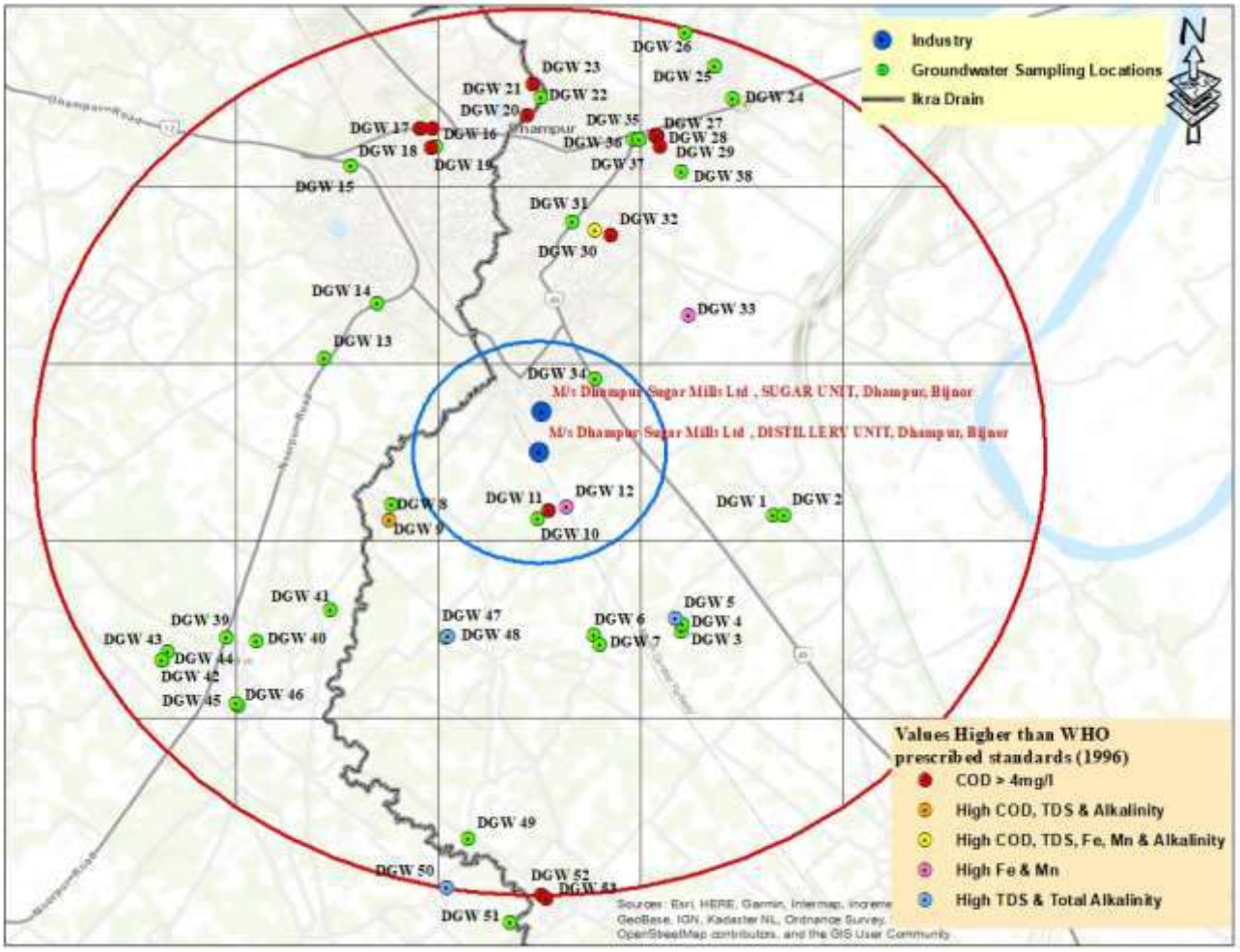


Figure 7.2 Sampling locations ground water and surface water samples collected from Dhampur, Bijnor

Details of ground water samples collected during survey are as under;

Table 7.3 Details of ground water samples collected

Sample code	Sample location	Bore well / Handpump	Depth (ft)	MOC of hand pump	Coordinates	
					Latitude	Longitude
DGW 1	Village Peepla (Saidpur Biro),	Handpump (Govt.)	120-170	GI	29.280163	78.533146
DGW 2	Village Peepla (Saidpur Biro),	Handpump (Pvt.)	50	MS	29.2801447	78.5339970
DGW 3	Village Haizri (Nurrullapur Cheema)	Handpump (Govt.)	150	GI	29.2706802	78.5256527
DGW 4	Village Haizri (Nurrullapur Cheema)	Handpump (Pvt.)	80	MS	29.271262,	78.525713
DGW 5	Village Haizri (Nurrullapur Cheema)	Handpump (Pvt.)	240	GI	29.2717363	78.52520602
DGW 6	Village Mauhdi	Handpump (Pvt.)	65	MS	29.2703673	78.5185559
DGW 7	Village Kundipura	Handpump (Govt.)	180	GI	29.269655	78.519040
DGW 8	Village Mirjapur Palla	Handpump (Govt.)	180	GI	29.2810147	78.5020338
DGW 9	Village Mirjapur Palla	Handpump (Pvt.)	100	MS	29.279747	78.501877
DGW 10	Village Mohda, Vidhan Sabha	Handpump (Govt.)	180	GI	29.279861	78.513945
DGW 11	Village Mohda, Vidhan Sabha	Handpump (Pvt.)	60	MS	29.280552	78.514849
DGW 12	Village Mohda, Vidhan Sabha	Handpump (Pvt.)	60	MS	29.280820	78.516336
DGW 13	Village Khai Khera	Handpump (Pvt.)	80-90	MS	29.292961	78.496625
DGW 14	Village Jaitra	Handpump (Govt.)	180	GI	29.297451	78.500862
DGW 15	Village Jaitra	Handpump (Govt.)	180	GI	29.308643	78.498759
DGW 16	Dhampur city near Saint Mary's school	Hand pump	180-200	Iron (MS/GI)	29.311646	78.505336

Sample code	Sample location	Bore well / Handpump	Depth (ft)	MOC of hand pump	Coordinates	
					Latitude	Longitude
DGW 17	Dhampur city near Saint Mary's school	Hand pump	180	HDPE	29.311625	78.504394
DGW 18	Dhampur city near Saint Mary's school	Hand pump	180	Iron (MS/GI)	29.310149	78.505681
DGW 19	Dhampur city near Saint Mary's school	Hand pump	180-190	Iron (MS/GI)	29.310124	78.50525
DGW 20	Village-Dhampur Hussainpur	Hand pump	180	Iron (MS/GI)	29.312716	78.513094
DGW 21	Village-Dhampur Hussainpur	Borewell	440-450	Iron (MS/GI)	29.311625	78.504394
DGW 22	Village-Dhampur Hussainpur	Hand pump	180	Iron (MS/GI)	29.314139	78.514242
DGW 23	Village-Dhampur Hussainpur	Hand pump	120	Iron (MS/GI)	29.31527	78.513586
DGW 24	Village-Suhaghpur	Hand pump	160	Iron (MS/GI)	29.31407	78.529841
DGW 25	Village-Suhaghpur	Hand pump	95	Iron (MS/GI)	29.31674	78.528383
DGW 26	Village-Suhaghpur	Hand pump	180	Iron (MS/GI)	29.319472	78.525963
DGW 27	Village- Rampur Bhola	Hand pump	180	Iron (MS/GI)	29.311072	78.5235577
DGW 28	Village- Rampur Bhola	Hand pump	240	Iron (MS/GI)	29.311029	78.523668
DGW 29	Village- Rampur Bhola	Hand pump	250	Iron (MS/GI)	29.310166	78.52392
DGW 30	Village- Dittanpur	Hand pump	110	Iron (MS/GI)	29.303997	78.516815
DGW 31	Village- Dittanpur	Hand pump	180	Iron (MS/GI)	29.303367	78.518656
DGW 32	Village- Dittanpur	Hand pump	180	Iron (MS/GI)	29.302941	78.519931
DGW 33	Village- Alaipur	Hand pump	30-40	Iron (MS/GI)	29.296431	78.526214
DGW 34	Village- Alaipur	Hand pump	170	Iron (MS/GI)	29.291274	78.518628
DGW 35	Village- Alaipur	Hand pump	200	Iron (MS/GI)	79.291337	78.5183

Sample code	Sample location	Bore well / Handpump	Depth (ft)	MOC of hand pump	Coordinates	
					Latitude	Longitude
DGW 36	Village- Alavalpur	Hand pump	270	Iron (MS/GI)	29.31076	78.52174
DGW 37	Village- Alavalpur	Hand pump	180	Iron (MS/GI)	29.31073	78.522231
DGW 38	Village- Alavalpur	Hand pump	180	Iron (MS/GI)	29.308113	78.525696
DGW 39	Village- Wajidpur	Handpump	180	GI pipe	29.270173	78.488647
DGW 40	Village- Wajidpur	Handpump	60	MS pipe	29.269886	78.491062
DGW 41	Village- Wajidpur	Borewell	120	MS pipe	29.272456	78.497119
DGW 42	Village- Mohammad Alipur Bhikan	Handpump	180	GI pipe	29.269061	78.483829
DGW 43	Village- Mohammad Alipur Bhikan	Handpump	180	GI pipe	29.268382	78.483446
DGW 44	Village- Mohammad Alipur Bhikan	Handpump	70	MS pipe	29.268351	78.483379
DGW 45	Village- Nindru Khas	Handpump	180	GI pipe	29.2646503	78.48960113
DGW 46	Village- Nindru Khas	Handpump	65	MS pipe	29.264814	78.489382
DGW 47	Village- Khujista Nagar	Handpump	140	GI pipe	29.2702064	78.5064849
DGW 48	Village- Khujista Nagar	Handpump	60	MS pipe	29.2702693	78.50663757
DGW 49	Village- Ajitpurdasi	Handpump fitted with submersible	150	GI pipe	29.253827	78.508287
DGW 50	Village- Ajitpurdasi	Handpump	65	MS pipe	29.249851	78.5065078
DGW 51	Village- Ajitpurdasi	Handpump	65	MS pipe	29.246974	78.511686
DGW 52	Village- Naseerpur Banwari	Handpump	70	MS pipe	29.249297	78.514217

Sample code	Sample location	Bore well / Handpump	Depth (ft)	MOC of hand pump	Coordinates	
					Latitude	Longitude
DGW 53	Village- Naseerpur Banwari	Handpump	240	GI pipe	29.2489509	78.51466369
Surface water sample collected						
SWS 1	Surface water (ponding)	ponding	Surface water ponding near the ash dumping site of M/s Dhampur Sugar Mills Ltd.		29.288670	78.524276

Analysis results of ground water samples collected during survey is tabled below;

Table 7.4 Analysis results of ground water samples collected from Dhampur

Sample Code	Depth (ft)	pH	COD	TSS	TDS	Total Alkalinity	Total Hardness	Cl^{-1}	F^{-}	SO_4^{-2}	NO_3-N	As	Cu	Fe	Mn	Zn
WHO Std.		**6.5-8.5**	**4.0**		**500**	**30-500**	**500**	**100**	**1.5 – 2.4**	**250**	**10-45**	**0.1**	**0.2**	**5.0**	**0.2**	**2-3**
DGW 1	120-170	7.7	BDL	-	222	209	275	10	0.3	BDL	BDL	BDL	BDL	0.38	0.1	0.13
DGW 2	50	7.2	BDL	-	488	345	303	48	0.2	23	BDL	BDL	BDL	1.31	0.1	0.2
DGW 3	150	7.7	BDL	-	228	202	295	14	0.3	BDL	BDL	BDL	BDL	1.05	0.08	0.09
DGW 4	80	7.7	BDL	-	228	178	275	8	0.3	BDL	12.8	-	-	-	-	-
DGW 5	240	7.1	BDL	-	778	554	453	114	0.2	81	1.4	BDL	BDL	0.61	**0.92**	0.09
DGW 6	65	7.4	BDL	-	360	205	384	14	0.2	10	BDL	BDL	BDL	2.75	0.11	0.09
DGW 7	180	7.6	BDL	-	230	178	267	8	0.4	BDL	BDL	BDL	BDL	0.64	0.06	0.07
DGW 8	180	7.7	BDL	13	238	221	263	12	0.6	BDL	13	BDL	BDL	1.34	0.09	0.03
DGW 9	100	7.8	8	20	1480	550	962	236	BDL	297	4.4	BDL	BDL	0.17	**0.92**	0.03
DGW 10	180	7.1	BDL	10	344	283	436	18	0.4	10	9	BDL	BDL	0.43	0.01	0.34
DGW 11	60	7	9	11	620	391	473	78	0.3	99	1.1	BDL	BDL	0.67	0.01	0.02
DGW 12	60	7.2	BDL	20	410	333	380	40	0.3	101	BDL	BDL	BDL	**7.85**	**1**	0.01
DGW 13	80-90	7.5	BDL	-	438	341	307	26	BDL	37	BDL	BDL	0.98	1.62	**0.5**	2.96

Sample Code	Depth (ft)	pH	COD	TSS	TDS	Total Alkalinity	Total Hardness	Cl^{-1}	F^{-}	SO_4^{-2}	NO_3-N	As	Cu	Fe	Mn	Zn
DGW 14	180	7.6	BDL	30	386	562	356	94	0.2	24	BDL	BDL	0.03	**9.39**	0.09	0.47
DGW 15	180	7.7	BDL	-	206	279	234	24	BDL	14	BDL	BDL	BDL	0.71	0.11	0.04
DGW 16	180-200	7.8	9	-	202	202	319	14	0.5	5	BDL	BDL	BDL	0.49	0.06	0.06
DGW 17	180	7.6	5	-	232	264	234	18	0.6	9	BDL	BDL	BDL	1.18	0.08	0.03
DGW 18	180	7.7	BDL	-	252	217	230	12	0.7	BDL	BDL	BDL	BDL	4.09	0.09	1.07
DGW 19	180-190	7.7	6	-	210	275	259	26	0.5	BDL	BDL	BDL	BDL	1.84	0.05	0.15
DGW 20	180	7.7	5	-	256	229	170	12	0.3	BDL	BDL	BDL	BDL	1.05	0.04	0.16
DGW 21	440-450	7.6	5	-	298	221	251	12	0.3	15	BDL	-	-	-	-	-
DGW 22	180	7.6	BDL	9	430	504	347	100	0.3	42	0.5	-	-	-	-	-
DGW 23	120	7.8	7	-	282	267	226	28	0.3	BDL	BDL	BDL	BDL	0.26	0.16	-
DGW 24	160	7.7	BDL	-	228	209	234	12	0.3	BDL	0.7	-	-	-	-	-
DGW 25	95	7.5	BDL	-	768	256	356	194	0.3	72	6.4	-	-	-	-	-
DGW 26	180	7.7	BDL	-	266	260	275	20	0.3	BDL	BDL	BDL	0.08	0.64	0.17	1.16
DGW 27	180	7.9	8	-	242	205	202	14	0.7	BDL	BDL	-	-	-	-	-
DGW 28	240	7.9	5	-	234	198	234	14	0.4	BDL	BDL	BDL	BDL	0.2	0.08	0.15

Sample Code	Depth (ft)	pH	COD	TSS	TDS	Total Alkalinity	Total Hardness	Cl^{-1}	F^{-}	SO_4^{-2}	NO_3-N	As	Cu	Fe	Mn	Zn
DGW 29	250	7.8	5	-	304	186	226	8	0.3	9	BDL	BDL	BDL	4.81	**0.99**	1
DGW 30	110	7.8	BDL	-	232	360	283	52	0.4	BDL	BDL	-	-	-	**-**	-
DGW 31	180	7.5	7	-	536	550	420	108	0.4	22	BDL	BDL	0.04	**14.5**	**0.64**	0.44
DGW 32	180	7.8	6	-	240	275	311	22	0.06	8	BDL	-	-	-	**-**	-
DGW 33	30-40	7.5	BDL	127	382	283	259	22	BDL	35	BDL	BDL	0.08	**16.7**	**0.87**	2.49
DGW 34	170	7.7	BDL	-	298	407	287	40	0.3	17	BDL	-	-	-	**-**	-
DGW 35	200	7.6	BDL	-	318	364	295	50	0.6	17	BDL	BDL	-	2.49	**0.4**	0.62
DGW 36	270	7.6	BDL	-	258	174	234	8	0.5	8	BDL	-	-	-	-	-
DGW 37	180	7.7	BDL	-	250	283	242	18	0.4	17	BDL	-	-	-	-	-
DGW 38	180	7.8	BDL	-	204	182	251	8	0.3	BDL	BDL	-	-	-	-	-
DGW 39	180	7.2	BDL	11	198	202	352	14	BDL	BDL	1.4	BDL	BDL	0.86	0.14	0.12
DGW 40	60	7.2	BDL	10	504	473	347	62	BDL	23	0.9	-	-	-	-	-
DGW 41	120	7.7	BDL	-	442	198	400	26	BDL	56	BDL	BDL	BDL	0.27	0.29	BDL
DGW 42	180	7.3	BDL	-	216	186	291	12	0.3	BDL	BDL	-	-	-	-	-
DGW 43	180	7.1	BDL	10	394	209	311	16	BDL	15	BDL	BDL	BDL	0.86	0.21	0.04

Sample Code	Depth (ft)	pH	COD	TSS	TDS	Total Alkalinity	Total Hardness	Cl^{-1}	F^{-}	SO_4^{-2}	NO_3-N	As	Cu	Fe	Mn	Zn
DGW 44	70	7.6	BDL	12	276	283	255	22	BDL	10	1.3	BDL	0.04	2.41	**0.51**	0.05
DGW 45	180	7	BDL	-	232	287	291	22	0.2	5	12.3	-	-	-	-	-
DGW 46	65	7.6	BDL	52	808	271	436	176	0.3	84	9.3	BDL	0.42	4.08	**0.35**	0.32
DGW 47	140	7.2	BDL	-	218	190	594	12	BDL	5	1.4	BDL	BDL	0.16	0.09	0.09
DGW 48	60	7.5	BDL	-	720	512	444	98	0.3	115	BDL	BDL	0.02	0.14	0.2	0.03
DGW 49	150	7	BDL	-	256	271	311	12	0.2	BDL	BDL	BDL	BDL	0.3	0.16	0.02
DGW 50	65	7	BDL	26	556	535	529	102	BDL	144	BDL	BDL	BDL	2.01	**0.38**	BDL
DGW 51	65	8	BDL	6	252	240	234	12	0.2	30	BDL	BDL	BDL	0.25	**0.45**	BDL
DGW 52	70	7	5	-	500	271	412	26	0.3	154	BDL	-	-	-	-	-
DGW 53	240	7	5	-	220	225	299	12	0.2	BDL	BDL	BDL	BDL	2.81	**0.31**	0.3

Note: All units in mg/l except pH and colour; colour measured in colour units

Note: WHO standard values are indicated below the name of the respective parameter. Higher observed values are highlighted.

Analysis results of surface water sample collected is tabled below:

Table 7.5 Characteristic of sample collected from surface water/ ponding

Sample code	**pH**	**COD**	**BOD**	**TSS**	**TDS**	**Color**	**Cl-1**	**SO4-2**	**PO4-P**	**NO3-N**
SWS 1	7.1	**2229**	**1306**	345	**2032**	**130**	177	**281**	2.47	8.63

Observations based on the interaction and analysis results of surface water samples:

Resident of village Nurrullapur Cheema informed about a waste material storage site owned by DSM, Dhampur near Alaipur village (lat. - 29.288670 and long. - 78.524276). The joint team visited the mentioned site which was located at aerial distance of about 1KM from the unit. The team found ponding of waste water and also dumping of glass wool/ industries scrap in the area of around one acre. The sample (SWS1) collected from the ponding on the site shows very high colour (130Hazen), BOD (1306 mg/l), COD (2229 mg/l), TDS (2032 mg/l) and Sulphate (281 mg/l) which indicates ponding of polluted wastewater.

Observation based on interaction with farmers on ground water:

1. Residents of village Saidpur Biro, Dhampur Hussainpur, Rampur Bhola, Alavalpur, Wajidpur, Mohammad Alipur Bhikan, Nindru khas, Khujista Nagar and Ajitpurdasi informed that the **color** of the ground water turns yellowish after keeping it in vessels for few hours. Total 25 groundwater samples were collected from village Saidpur Biro (2 samples), Dhampur Hussainpur (4 samples), Rampur Bhola (3 samples), Alavalpur (3 samples), Wajidpur (3 samples), Mohammad Alipur Bhikan (3 samples), Nindru khas (2 samples), Khujista Nagar (2 samples) and Ajitpurdasi (3 samples). Out of 25 groundwater samples 16 samples were analysed for heavy metals. The groundwater analysis of samples from these villages suggest **Fe** varying from 0.14 to 4.81 mg/l. Fe levels found within limit as per WHO standard limit of 5 mg/l in all sixteen samples. However, ten samples had higher Fe than Indian drinking water standard ISO:10500 (2012) of 0.3 mg/l. The changes in colour of water to yellow after few minutes of storing might be due to oxidation of iron present in groundwater. Out of 16 samples analysed for heavy metals four samples were from u/s of the unit and 12 samples from d/s of the unit.
2. Residents of village Mohammad Alipur Bhikan, Nindru khas, village Khujista Nagar and Ajitpurdasi raised issues regarding majorly stomach related diseases and issue of stone formation due to continuous consumption of groundwater for drinking purposes. Total ten samples were collected from mentioned villages, Alipur Bhikan (3 samples), Nindru khas (2 samples), village Khujista Nagar (2 samples) and Ajitpurdasi (3 samples). Samples from Nindru khas, village Khujista Nagar and Ajitpurdasi shows higher TDS and alkalinity or higher TDS and Chloride than WHO groundwater standards (1996). As informed by Health department, District- Bijnor, patients with seasonal disease are generally observed in this district and the unit has no contribution/role to these health-related diseases.

Observations based on the analysis results of ground water samples:

1. COD, TDS and alkalinity were found higher than WHO (1996) prescribed limit in groundwater at DGW 9 and DGW 31. TDS and Total Alkalinity was found on higher side at DGW 5, DGW 48 and DGW 50. Chloride was found higher than WHO (1996) prescribed limit of ionic concentration in groundwater at DGW 5, DGW 9, DGW 14, DGW 23, DGW 25 and DGW 31. All the mentioned samples were collected at depth range of 100-240 ft. These samples are randomly distributed and doesn't show any pattern of impact as samples DGW 14, DGW 23, DGW 25 and DGW 31 were from u/s of the unit and others samples from d/s of the unit.
2. COD higher than WHO prescribed limit was observed in 15 samples (11 in upstream and 4 in downstream of the unit). Out of total 15, three samples were collected from shallow depth of 60-120 ft. and remaining twelve samples were collected from deep depth ranging from 180-450 ft. In the samples from deep borewells higher COD values were observed. The 11 samples located u/s of the unit showing high COD values were collected from in and around Dhampur city, this might be due to contamination of groundwater aquifer due to percolation of wastewater/ sewage flows in the Ikra drain.
3. All heavy metals were well within WHO standard (1196) of groundwater except Fe at four locations (one downstream and three upstream of the unit) collected from shallow depth of 30-180 ft. and Mn at 13 locations (eight downstream and five upstream of the unit). Out of total 13 locations for Mn, eight samples were collected from shallow depth of 30-100 ft. and remaining five samples were collected from deep depth ranging from 180-250 ft.

7.3. Assessment of crop damage

Observation based on interaction with farmers on crop damage:

- Residents of village Saidpur Biro village informed that a local drain which flows approx. 200 m away from the agriculture fields. This drain carries waste water of Dhampur sugar mills in to the fields during discharge or whenever it rains, which affect the crop productivity. Villagers informed that average yield of Sugarcane in the area is around 60qtls/bigha.
- Residents of village Ajitpurdasi also raised the issue of crop damage due to overflow of Ikra drain into adjacent crop field. It was also reported that trees in mango orchard (at Lat-29.246974, Long-78.511686) are getting badly affected due to seepage of polluted water from nearby Ikra drain.
- Residents of village Haizri, Block Allahaipur and Mauhdi raised the issue related with the ash that it affects more when wind direction turns towards agricultural land. No issue related with crop productivity and plant diseases were raised.
- Farmers from village Mohra informed that average yield of Sugarcane in the village is around 85qtls/bigha.

Observation based on assessment of Agricultural Department on crop damage:

- District Agriculture Department, Bijnor, informed that soil at these 29 locations was found fertile and is capable for crop production. No impact of industrial pollution was observed on the soil samples.
- It is concluded based on the joint survey conducted by District Agriculture, Horticulture, & Forest Department and interaction with local farmers & residents that though there are no evidence of loss of yield or damage to crop, however, deposition of fly ash on leaves of crops/ orchard & cloths of residents of nearby villages do occur which may cause inconvenience/ uneasiness.

7.4. Survey and monitoring of Ikra drain

Ikra drain originates from a pond (also called "Jheel" by villagers) in Dhampur-Hussainpur village in Dhampur Tehsil of Bijnor district (Uttar Pradesh) and travels approximately 50 km before meeting river Karula near Kiwar village (Uttar Pradesh). Ikra drain receives wastewater from Dhampur city and traverses a distance of ~7-8 km before effluent from Dhampur Sugar Mill is discharged into the drain. Monitoring of Ikra drain was carried out from its origin in Dhampur-Hussainpur village (Uttar Pradesh) to confluence with river Karula near Kiwar village in Uttar Pradesh during Dec 01 – 02, 2021. Sampling locations on Ikra drain and river Karula are shown in Figure 7.3.

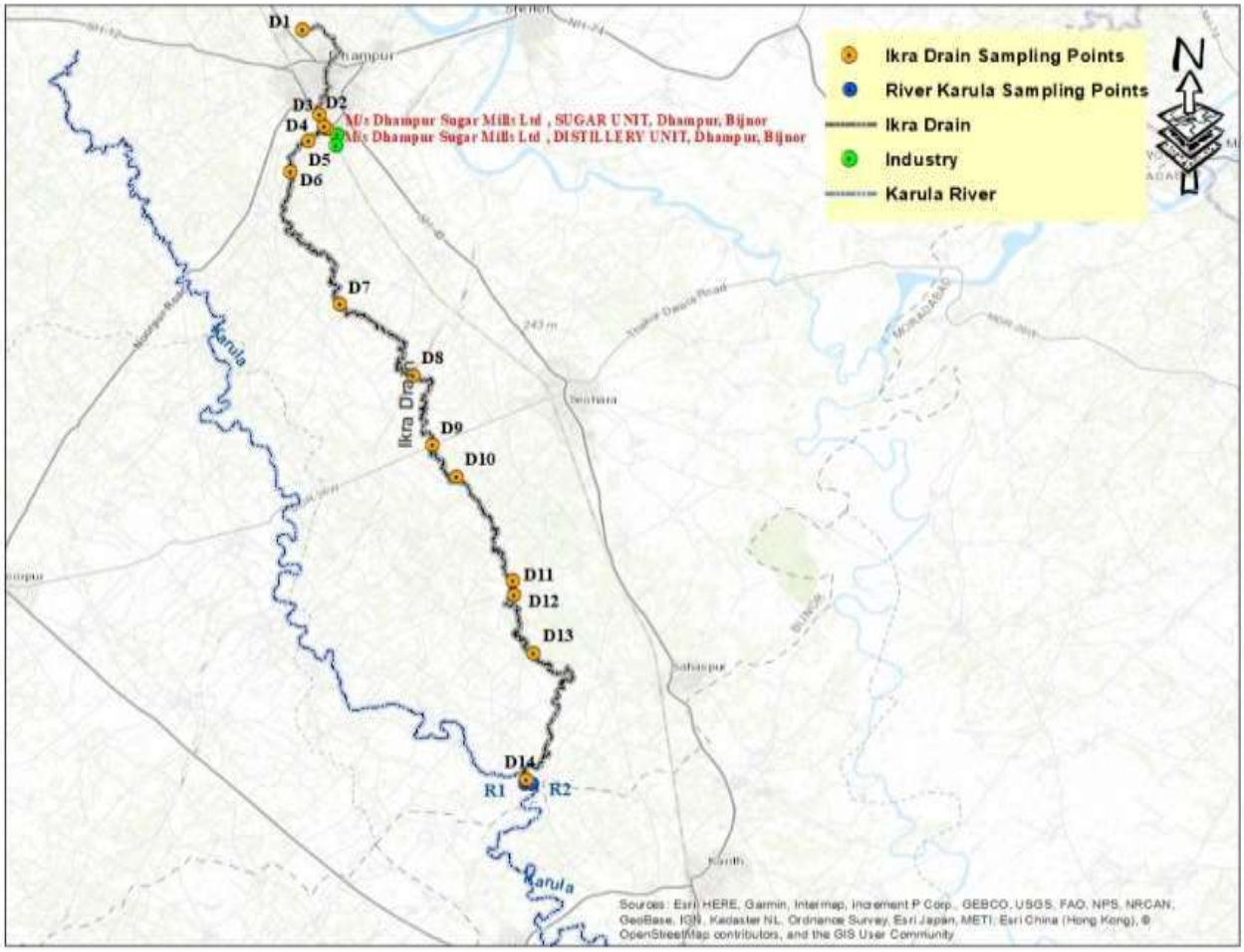


Figure 7.3 Sampling locations on Ikra drain and river Karula

Details of sample collected during survey and monitoring of Ikra drain & karula river is tabled below:

Table 7.6 Sampling details of Ikra drain from origin to confluence with river Karula

Sampling code	Sampling location	Co-ordinate	Flow condition	Sample taken (Y/N)	Major observation
D1	Origin point of Ikra drain i.e., Jheel in Dhampur-Hussainpur village	29.320961, 78.503635	Stagnant	Y	Origin point of Ikra drain is a pond in Dhampur-Hussainpur village which is ~ 7-8 km upstream of Dhampur Sugar Mill.
D2	Ikra drain u/s Dhampur Sugar Mill near Railway Crossing	29.294762, 78.508629	38.88	Y	Sewage from Dhampur city is discharged into Ikra drain at u/s of this location.

Sampling code	Sampling location	Co-ordinate	Flow condition	Sample taken (Y/N)	Major observation
D3	Drain from Dhampur Sugar Mill	29.290605, 78.510880	Lean flow	Y	• Lean flow was observed in the drain. • Wastewater analysis showed BOD-18 mg/l and COD-71 mg/l.
D4	Ikra drain d/s Dhampur Sugar Mill	29.291295, 78.510106	36.86	Y	-
D5	Ikra drain near compost yard of Dhampur Sugar Mill	29.286740, 78.505426	Not measured	Y	Sampling location was along the compost yard of Dhampur Sugar Mill.
D6	Ikra drain near Mirzapur Palla village	29.277206, 78.499738	27.64	Y	D/s of compost yard of DSM unit
D7	Ikra drain near Hariyana village	29.236208, 78.514790	34.56	Y	A villager informed that discharge of molasses in the drain has been observed during May-June months. He also informed that the groundwater is also contaminated at ~ 60-65 feets.
D8	Ikra drain near Alairpur village along Preshak Nahar	29.214444, 78.537310	Not measured	Y	• It was informed by a villager that the drain water was diluted using freshwater from Preshak Nahar on the day before the inspection. The pump was operated for ~ 22 hr. • In Ikra drain, BOD and COD were observed as 36 mg/l and 144 mg/l, respectively. • Also, at this location, a pit was located at the bed of the drain wherein yellow-coloured wastewater was found. Sample analysis showed BOD-29 mg/l, COD-133 mg/l, TDS-3264 mg/l and Sulphate-1271 mg/l. • A villager informed that industries dump chemicals in the drain at this location.

Sampling code	Sampling location	Co-ordinate	Flow condition	Sample taken (Y/N)	Major observation
D9	Ikra drain at Noorpur-Seohara Road	29.192780, 78.543179	30.21	Y	-
D10	Ikra drain near Rampur Krisna village	29.182949, 78.550581	35.36	Y	• Villager (Sh. Ravi) informed that discharge of effluent in Ikra drain 2-3 times in a year and during the rainy season, contaminated water from Ikra drain enters nearby agricultural fields.
D11	Ikra drain near Ratanpura village	29.151057, 78.567997	33.59	Y	• Sewage from Ratanpura village is discharged into the Ikra drain at this location. Samples from the Ikra drain were collected at d/s of sewage discharge location. • BOD-52 mg/l, COD-166 mg/l and TSS-182 mg/l were observed in the drain. • A villager (Sh. Ahmad Ali) informed that effluent from Dhampur Sugar Mill is discharged into the drain throughout the year.
D12	Ikra drain near Dhingrapur village	29.146727, 78.568389	Not measured	Y	• Mixing of irrigation water in Ikra drain near Dhingrapur village as cleaning work of sump in the irrigation canal. • Colour-31 mg/l, BOD-47 mg/l and COD-169 mg/l were observed in Ikra drain.
D13	Ikra drain near Gangadharpur village	29.128423, 78.574209	31.1	Y	• Colour-20 mg/l, BOD-13 mg/l and COD-76 mg/l were observed in Ikra drain.
R1	River Karula b/c Ikra drain	29.088383, 78.571697	Not measured	Y	• Water quality of river Karula b/c Ikra drain was meeting bathing criteria w.r.t. BOD-BDL (against < 3.0 mg/l), DO-10.2 mg/l (against > 5.0 mg/l) and pH-7.0 (against 6.5-8.5). However, water quality of river Karula at this location was not meeting the bathing criteria

Sampling code	Sampling location	Co-ordinate	Flow condition	Sample taken (Y/N)	Major observation
					w.r.t. fecal coliform-4900 MLN/100 ml (against 2500 MPN/100 ml).
D14	Ikra drain b/c river Karula near Kiwar village	29.089367, 78.572155	27.64	Y	• BOD-13 mg/l, COD-75 mg/l, colour-16 Hazen and Sulphate-45 mg/l.
R2	River Karula a/c Ikra drain	29.088338, 78.574015	Not measured	Y	• Water quality of river Karula a/c Ikra drain was meeting bathing criteria w.r.t. pH-7.3 (against 6.5-8.5), DO-9.6 mg/l (against > 5.0 mg/l) and fecal coliform-2300 MLN/100 ml (against 2500 MPN/100 ml) except BOD-4 mg/l (against < 3.0 mg/l).

Analysis results of sample collected during survey of Ikra drain and Karula river for general parameters is tabled below:

Table 7.7 Analysis results of sample collected from Ikra drain and Karula river

	Sampling code	pH	COD	BOD	TSS	TDS	NO_3-N	SO_4^{2-}	NH_3-N	Total coliform	Fecal coliform	Cr	Cu	Fe	Mn	Ni	Pb	Zn
Sampling location upstream of DSM sugar and distillery unit																		
Stretch - I	D1	7.8	25	4	17	246	0.6	6	0.6	-	-	BDL	BDL	1.27	0.04	BDL	BDL	0.04
	D2	7.1	135	54	64	292	2.08	136	34	-	-	BDL	0.03	1.27	0.18	BDL	BDL	0.17
	D3	7.2	71	18	29	424	1.08	70	7	-	-	0.04	0.17	11.02	0.34	0.02	0.03	0.3
Sampling location downstream of DSM and distillery unit																		
Stretch - II	D4	7.3	226	66	138	316	1.86	48	12	-	-	BDL	0.05	2.81	0.19	BDL	0.03	0.27
	D5	7	198	49	47	332	1.7	36	28	-	-	BDL	0.02	1.92	0.17	BDL	BDL	0.18
	D6	7	391	123	408	244	1.27	60	12	-	-	0.03	0.14	14.41	0.26	0.03	0.09	0.44
	D7	7.1	207	81	49	284	1.34	57	12	-	-	BDL	0.02	1.03	0.17	BDL	BDL	0.03
Stretch - III	D8	7.2	144	36	35	264	1.44	44	9	-	-	BDL	BDL	0.48	0.17	BDL	BDL	0.02
	D9	7.2	160	59	38	360	1.17	47	6	-	-	BDL	BDL	0.21	0.18	BDL	BDL	0.04
	D10	7.1	133	39	35	280	1.58	42	16	-	-	BDL	BDL	0.5	0.2	BDL	BDL	0.04
	D11	7.3	166	52	182	344	1.14	58	6	-	-	BDL	BDL	0.63	0.18	BDL	BDL	0.04
	D12	7.2	169	47	83	368	1.47	53	5	-	-	BDL	BDL	1.52	0.2	BDL	BDL	0.04
	D13	7.4	76	13	20	336	1.43	43	6	-	-	BDL	BDL	0.54	0.17	BDL	BDL	0.01
Stretch - IV	R1	7	12	BDL	15	234	2.6	7	BDL	54000	4900	BDL	BDL	0.03	0.01	BDL	BDL	BDL
	D14	7.5	75	13	19	324	0.93	45	13	3100	1700	BDL	BDL	0.72	0.12	BDL	BDL	0.04
	R2	7.3	18	4	16	110	1.4	13	3.1	7900	2300	BDL	BDL	0.76	0.15	BDL	BDL	0.01

Note: All parameters are expressed as mg/l except pH, conductivity (µmho/cm), colour (Hazen) and TC/FC (MPN/100 ml) (D: drain, R: river)

Physico-chemical characteristics of Ikra drain and Karula River:

Sampling location on Ikra drain and Karula river may be classified into three stretches

- Stretch – I – Ikra drain from origin to upstream of DSM sugar and distillery unit. Discharge of domestic sewage from Dhampur city into Ikra drain were observed in this stretch. Analysis results of two sample collected in this stretch show pH values from 7.1 to 7.8, colour from BDL to 29 colour unit, BOD from 4 to 54 mg/l, COD from 25 to 135 mg/l, TSS 17 to 64 mg/l, TDS from 246 to 292 mg/l, Sulphate from 06 to 136 mg/l, nitrate 0.6 to 2.08 mg/l and ammoniacal nitrogen from 0.6 to 34 mg/l which indicate that water in Ikra drain is polluted as it carries sewage from Dhampur city.
- Stretch – II -Downstream of DSM sugar and distillery unit to Ikra drain at Hariyana village, UP. Four samples (D4, 5, 6 and 7) were collected from this stretch. Waste water analysis shows high BOD (49-123 mg/l), COD (198-391 mg/l) and TSS (47-408). Maximum BOD (123 mg/l), COD (391 mg/l) and TSS (408 mg/l) of entire stretch of Ikra were observed at D6 located just after compost yard of DSM, Dhampur. Analysis results indicate that Ikra drain is more polluted in the stretch than stretch 1. However, no discharge from DSM unit was observed during survey.
- Stretch – III - Sampling location Ikra drain, Hariyana village, UP to confluence with Karula River. Six samples (D8, 9, 10, 11, 12,13 and 14) were collected from this stretch of Ikra drain. Most of the heavy metals are below detectable limit except Iron and Manganese. Analysis results indicate that quality of wastewater in Ikra drain improves in comparison to stretch II which might be due to dilution of Ikra drain by freshwater from Preshak canal on the day before inspection as informed by local residents.
- Stretch – IV – Karula river before and after discharge of Ikra drain. Two samples (R1 and R2) were collected from Karula River. After confluence with Ikra drain, increase in BOD, COD, TSS, TDS, Sulphate, Ammoniacal Nitrogen were observed from BDL to 4 mg/l, 12 to 18 mg/l, 15 to 16 mg/l, 110 to 234 mg/l, 1.4 to 2.6 mg/l, 7 to 13 mg/l and BDL to 3.1 mg/l respectively in Karula river. Results indicate that water quality of river Karula deteriorate slightly after confluence of Ikra drain.

Conclusion based on the survey in Dhampur, District Bijnor:

1. Based on the soil analysis report District agriculture officer, Bijnor, informed that the soil at all locations was found fertile and is capable for crop production. No impact of industrial pollution was observed on the soil samples.
2. The changes in colour of groundwater water to yellow after few minutes of storing might be due to oxidation of iron and manganese present in groundwater. The geology of the area seems to have influence on groundwater parameters.
3. Cases of damage of trees/crop/orchard/garden due to the pollution by DSM Dhampur unit were not reported by concerned district agencies; however, deposition of fly ash/ dust on leaves were observed.
4. Ikra drain is more polluted in D/s DSM unit (stretch II &III) than U/s of unit (stretch I). However, water quality of Ikra drain improve in stretch III before confluence with Karula river which might be due to dilution of Ikra drain by using freshwater from Preshak canal on the day before inspection as informed by local residents

5. Chief Medical Officer, Bijnor vide letter dated 22.12.2021 has submitted its health care report of District Bijnor consulted at Public Health Center (PHC) and Community Health Center (CHC) considering the crushing season from November to May and non-crushing season from June to October. *It is informed that most of the patient were suffering from seasonal cold cough, skin irritation, breathing problem and diseases related to stomach. All these patients are presently recovered from these health-related issues and are in healthy state now. He also informed that patients with seasonal disease are generally observed in this district and the unit M/s Dhampur Sugar Mills Ltd., Bijnor has no contribution/role to these health-related diseases.* **Annexure-11**

6. District Agriculture officer, Bijnor, vide letter dated 23.12.2021 informed that, *the analysis report of the 29 soil samples collected on 01.12.2021 and 02.12.2022 indicate that soil of the inspected area was found capable for crop production and no adverse impact of industrial pollution was observed on crop production. In addition, with this, sown crops were observed in normal condition during the inspection.* **Annexure-12**

7. District Horticulture Officer, Bijnor, vide letter dated 24.12.2021 reported that, *productivity of orchard in the area was normal and no adverse impact was observed.* **Annexure-13**

8. Executive Engineer, Uttar Pradesh Jal Nigam (Rural) vide letter dated 21.12.2021 provided the data of ground water samples collected from Dhampur, Block- Alahpur dated 22.11.2016, 20.4.2017, 09-10.08.2018, 2 24, 25.08.2018, 28.06.2019, 12.02.2020 and 21.08.2020 which is satisfactory as mentioned in the report. **Annexure-14**

9. Chief Executive Officer, Fisheries Development Agency, Bijnor, reported that, *no pollution generated problem in ponds of villages located in the vicinity of M/s DSM, Asmoli is existing.* **Annexure-15**

<u>Remedial measure for rejuvenation of Ikra drain</u>

Analysis results of water quality of Ikra drain shows that drain water is polluted in entire stretch as it carries sewage from Dhampur city. However, it is pertinent to mention that Ikra drain is more polluted in D/s DSM unit (stretch II & III) than U/s of unit (stretch I). No untreated effluent and sewage shall be discharge into drain. CPCB guideline for "*Alternative treatment technologies for wastewater treatment of drains*" prepared in compliance of Hon'ble NGT direction in the matter of OA no. 06/2012 may be referred for interim measure. Cost of the treatment system generally varies between 50 lacs to 1 crore per unit which shall be bear by either DSM unit or by other concern government agency or by both. The length of Constructed Wetland (CWS) and number of units depends on the flow of water, wastewater quality (BOD, COD, TSS and DO levels) and width of the drain. These systems can be installed and operated within short gestation period of around 12-24 months and not only treat the wastewater but also help in recharging of ground water. For designing of these system, expert institute like Centre for Environmental Management of Degraded Ecosystem (CEMDE), may also be engaged/approached for better technical know-how about the natural treatment system.

Remedial measure for Groundwater contamination

As per Central Ground Water Board (CGWB), report on National Compilation on Dynamic Groundwater Resource of India, 2020, out of 11 monitored locations, four blocks/ towns of Bijnor fall under semi-critical area and one under critical area. As per Uttar Pradesh Jal Nigam on present survey/sampling report no adverse impact of industry in groundwater was found, so, it is recommended to:

1) Identify location of safe drinking groundwater and marking all unsafe groundwater to avoid their use for drinking purposes.
2) 53 groundwater sample were collected from 29 village. Out of these 29 vilages ground water quality shows higher than WHO permissible limit for **COD** at Village Mirjapur Palla, Mohda, Dhampur city near Saint Mary's school, Dhampur Hussainpur, Rampur Bhola, Dittanpur and Naseerpur Banwari; **TDS** at Village Haizri (Nurrullapur Cheema), Mirjapur Palla, Mohda, Suhaghpur, Dittanpur, Wajidpur, Nindru Khas, Khujista Nagar, Ajitpurdasi and Naseerpur Banwari; Alkalinity at Village Haizri (Nurrullapur Cheema), Mirjapur Palla, Jaitra, Dhampur Hussainpur, Dittanpur, Khujista Nagar and Ajitpurdasi; **Fe** at Village Mohda, Vidhan Sabha, Jaitra, Dittanpur and Alaipur; **Mn** at Village Haizri (Nurrullapur Cheema), Mirjapur Palla, Mohda, Khai Khera, Rampur Bhola, Dittanpur, Alaipur, Wajidpur, Mohammad Alipur Bhikan, Nindru Khas, Khujista Nagar, Ajitpurdasi and Naseerpur; **Zn** at Village Khai Khera and Alaipur Banwari at shallow depth for drinking. These villages need to get deep bore well by the unit or by concerned district administration.
3) A detailed plan may be made by Central ground water board/ UPGWD for recharge of ground water.

Photographs taken during detailed study in Dhampur region.

GW sample collection in purana Dhampur	GW sample collection in Dhampur city
Soil sample collection in purana Dhampur	Soil sample collection in Dhampur
Origin point of Ikra drain i.e., Jheel in Dhampur-Hussainpur village	Ikra drain behind DSM unit

Drain from area in front of Dhampur Sugar Mill	Ikra drain near compost yard of Dhampur Sugar Mill
Ikra drain near AliArpur village along Preshak Nahar	River Karula A/c of Ikra drain

8. Recommendations

- The contamination in Ground Water has been observed at shallow depth handpumps/borewells, hence it is recommended that UPGWD & Nalkoop Vibhag may be asked to look into the matter, and arrangement for deep borewell shall be made.
- UPGWD to ensure marking and sealing of unsafe borewells/ handpumps.
- Also, for ensuring availability of safe drinking water to the residents of villages highlighted in the report UP Jal Nigam should make provisions for supplying tap water.
- Units shall ensure that installed ESP/ Bag filters are operated effectively.
- Feasibility of in-situ remediation for restoration & rejuvenation of River Sot shall be explored and action plan for the same to be prepared by the concerned department such as U.P. Irrigation Department in consultation with all the concerned agencies. If necessary an expert agency may be engaged.
- To prevent the impact of Ikra drain, Dhampur (Bijnor) on water quality of river Karula, feasibility of constructed wetland shall be explored before the confluence of Ikra drain into Karula river.
- UPPCB shall issue necessary directions to the units for ensuring that no discharge of partially treated/ untreated effluent takes place into Pilakhar River, Sot River & Ikra drain or any water body takes place.

Member list

Sr. No.	Members	Signature
1.	Sh. A.K. Vidyarthi, Scientist 'F', Director & DH- WQM- II, CPCB, Delhi	Ajit Kumar Vidyarthi
2.	Sh. Nazimuddin, Scientist 'F', DH- IPC-II, CPCB, Delhi	Nazim
3.	Mrs Reena Satavan, Scientist 'D', CPCB, Delhi	

Sr. No.	Members	Signature
4	District Magistrate, District- Bareilly	
5	Sh. Rohit Singh, Regional Officer, UPPCB, Regional Office- Bareilly	23/06/22

Sr. No.	Members	Signature
6	District Magistrate, District Sambhal	
7.1	Sh. Vikas Mishra, Regional Officer, UPPCB, Regional Office - Moradabad	
7.2	Sh. Vinay Kumar Mishra, Sub Divisional Magistrate, Tehsil Sambhal, District Sambhal	

Sr. No.	Members	Signature
8	Sub-Divisional Magistrate, Dhampur, District-Bijnor	
9	Sh. Ashutosh Chauhan, Regional Officer UPPCB, Regional Office- Bijnor	
10	Sh. Mahir Hussain, Assistant Environmental Engineer, UPPCB, Regional Office- Bijnor	
11	Sh S.K. Tripathi, Scientific Assistant , UPPCB, Regional Office- Bijnor	

Annexure – I : Groundwater Quality index

Groundwater Quality Index

For computing WQI three steps are followed. In the first step, each of the 19 parameters has been assigned a weight (wi) according to its relative importance in the overall quality of water for drinking purposes (Table 1). The maximum weight of 5 has been assigned to the parameter nitrate due to its major importance in water quality assessment. Magnesium which is given the minimum weight of 1 as magnesium by itself may not be harmful. Other In the second step, the relative weight (Wi) is computed from the following equation:

$$W_i = \frac{w_i}{\sum_{i=1}^{n} w_i}$$

Where, W_i is the relative weight, w_i is the weight of each parameter and n is the number of parameters. Calculated relative weight (W_i) values of each parameter are also given in Table 1.

Table - Relative weight of chemical parameters

Parameter	BIS	Weight (w_i)	Relative Weight (W_i)
pH	6.5-8.5	4	0.117647
Total hardness (TH)	300-600	2	0.058824
Chloride	250-1,000	3	0.088235
Total dissolved solids (TDS)	500-2,000	4	0.117647
Fluoride	1-1.5	4	0.117647
Manganese	0.1-0.3	4	0.117647
Nitrate	45-100	5	0.147059
Iron	0.3-1.0	4	0.117647
Sulphate	200-400	4	0.117647
		$\sum$ wi = 34	$\sum$ Wi = 1.000

In the third step, a quality rating scale (q_i) for each parameter is assigned by dividing its concentration in each water sample by its respective standard according to the guidelines laid down in the BIS and the result multiplied by 100:

$q_i = (C_i / S_i) \times 100$

where qi is the quality rating, C_i is the concentration of each chemical parameter in each water sample in mg/L, and S_i is the Indian drinking water standard for each chemical parameter in mg/L according to the guidelines of the BIS 10500, 1991

For computing the WQI, the SI is first determined for each chemical parameter, which is then used to determine the WQI as per the following equation

$SI_i = W_i \cdot q_i$

$WQI = \sum SI_i$

SI_i is the subindex of i^{th} parameter; q_i is the rating based on concentration of i^{th} parameter and n is the number of parameters. The computed WQI values are classified into five types, “excellent water” to “water, unsuitable for drinking”.

WQI value	**Water quality**
<50	excellent
50-100	good water
100-200	poor water
200-300	very poor water
>300	Water unsuitable for drinking

Meerganj

Groundwater Quality

33 groundwater samples were collected from borewell/ handpumps and tubewells around 11 villages. All samples were analysed for general parameter and analysis for heavy metals were carried out for 11 samples (one sample from each village). River Pilakhar flows from north (Bazpur, Uttarakhand) towards south and confluence with river Bakhra at Village Jauner, Bareilly. Considering contour gradient of the study area towards confluence point of river Pilakhar with river Bakhra at Jauner Village, location upstream side (U/s) of the confluence point may be considered as having less potential of impact of any discharge on groundwater and villages/locations at downstream (D/s) side of confluence point may be considered as high potential of groundwater contamination due to any discharge from industrial unit. The groundwater samples were compared with prescribed specification of ionic concentration in groundwater by WHO standards (1996).

The determination of Physio-chemical parameters of groundwater samples was carried out by standard protocol given by APHA, 2012.

Out of 33 groundwater samples seventeen samples (MGW1, MGW2, MGW3, MGW4, MGW16, MGW17, MGW18, MGW19, MGW20, MGW21, MGW22, MGW23, MGW24, MGW25, MGW26, MGW27 and MGW28) located at upstream of the unit; twelve samples (MGW8, MGW9, MGW10, MGW11, MGW12, MGW13, MGW14, MGW29, MGW30, MGW31, MGW32 and MGW33) located at downstream side of the unit and four samples (MGW5, MGW6, MGW7 and MGW15) located within one km radial periphery of the unit.

Physio-chemical Characterization

The pH of the groundwater in the study area is neutral in both upstream and downstream and it varied from 7.1 to 7.7, falls into pH range of natural water (6.5 - 8.5).

The total dissolved solids content of groundwater in the upstream side varied from 316 to 1014 mg/l, 318 to 842 mg/l in downstream side and 288 to 546 mg/l within one km radial periphery of the unit. According to the classification of groundwater on the basis of TDS (Ahouansou et al., 2018), 3.03% of the total groundwater samples are of excellent water quality (<300 mg/l), 72.73% of good water quality (300-600 mg/l), 18.18% of fair water quality (600-900 mg/l) and 6.06% of poor water quality (900-1200 mg/l), indicated that groundwater quality good to fair in terms of TDS.

Table- Classification of water quality on the basis of total dissolved solids

TDS Value (mg/l)	Water Quality	No of Samples	Percentage of Samples
<300	Excellent	1	3.03
300 - 600	Good	24	72.73
600 - 900	Fair	6	18.18

900 -1200	Poor	2	6.06
>1200	unacceptable	0	0.00

Groundwater classification based on total hardness (TH) values, as TH<75 mg/l, 75-150 mg/l, 150-300 mg/l and >300mg/l, designated as soft, moderately hard, hard and very hard respectively (Sawyer and McCarty,1967). Thus, 51.52% belongs to hard water and rest 48.48% samples comprises very hard water. The result indicates that the groundwater quality in the study area is hard to very hard.

Alkalinity has direct relation with hardness and pH of the groundwater. It ranged from 262 to 806 mg/l in upstream side samples, 242 to 617 mg/l in downstream side of sample and 250 to 430 mg/l within one km radial periphery of the unit.

Table - Classification of water quality on the basis of total hardness

TH Value (mg/l)	Water Quality	No of Samples	Percentage of Samples
<75	soft	0	0
75-150	moderately hard	0	0
150-300	hard	17	51.52
>300	very hard	16	48.48

Colour was found in only two samples (MGW19 and MGW21) of upstream side of the unit and one of the samples (MGW31) of downstream side of the unit. COD varied from BDL to 29 mg/l in upstream side and its concentration were found below detectable limit in downstream and within one km radial periphery of the unit. The chloride concentration varied from 8 to 108 mg/l in upstream of the unit, 8 to 42 mg/l in downstream side and 8 to 18 mg/l in one km radial periphery of the unit. The fluoride concentration was found in only two samples (MGW25 and MGW 28) of upstream and five samples (MGW9, MGW11, MGW12, MGW14 and MGW33) of downstream and its concentration was below detectable limit in one km radial periphery of the unit. Fluoride concentration varied from 02. to 0.4 mg/l in upstream and downstream of the unit. Sulphate concentration varies from 27 to 273 mg/l in upstream side, 25 to 296 mg/l downstream side and 11 to 84 mg/l in one km radial periphery on the unit. Nitrate concentration was found only in four samples (MGW25 in upstream and three MGW9, MGW10, MGW30 in downstream sample) having concentration of 0.3 mg/l in upstream and 0.3 to 8.6 mg/l in downstream side of the unit.

The heavy metal concentration of As, Co, Cr, Cu, Ni and Pb were mostly below detectable limit or below WHO standard. Concentration of Fe varied from BDL to 7.94 mg/l in upstream, BDL to 2.58 mg/l in downstream and 1.98 mg/l in one of the samples within one km radial periphery of the unit. Manganese varied from BDL to 1.57 mg/l in upstream, BDL to 0.31 mg/l in downstream and BDL to 0.24 mg/l in one km radial periphery of the unit. Similarly, Zinc varied from BDL to 5.18 mg/l in upstream, BDL to 0.15 mg/l in downstream and BDL to 0.01 mg/l in one km radial periphery on the unit.

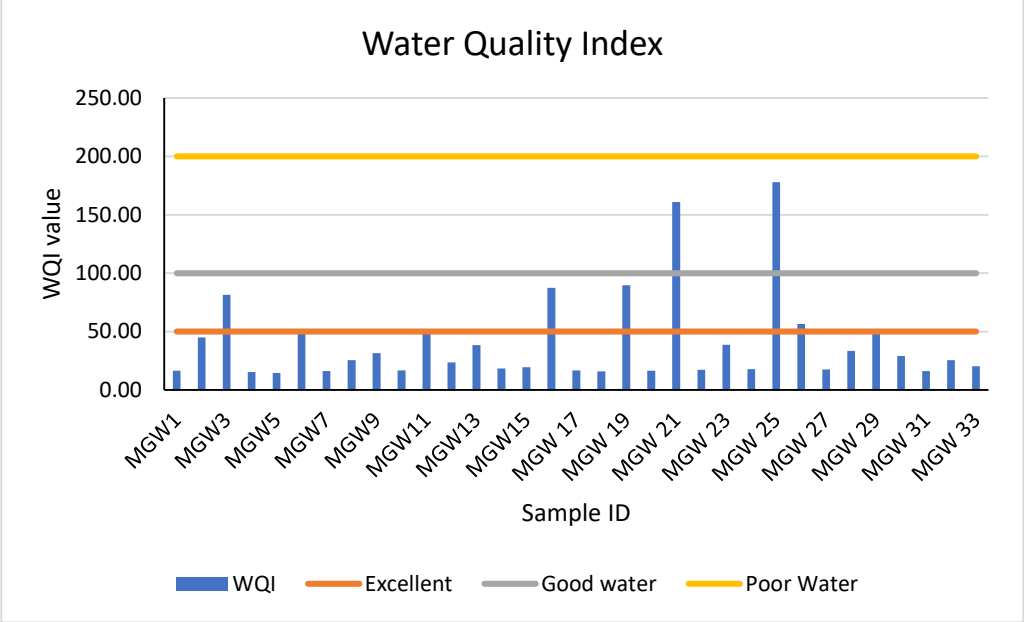
Groundwater Quality

Table - Water quality classification based on WQI value

WQI value	Water quality	No of Samples	Percentage of water samples
<50	excellent	25	75.76
50-100	good water	6	18.18
100-200	poor water	2	6.06
200-300	very poor water	0	0.00
>300	Water unsuitable for drinking	0	0.00

Groundwater quality index were calculated based on Ramakrishnaiah et al. 2009. For quality rating BIS standard as reference concentration were taken in calculation and for parameter where limits are in certain range, the higher value of the BIS standard was taken into consideration.

Groundwater quality index suggest that around 75.76% of sample collected is of excellent water quality, 18.18% of good water quality and 6.06% of poor water quality.


Water Quality Index
250.00
200.00
150.00
100.00
50.00
0.00
WQI value
MGW1
MGW3
MGW5
MGW7
MGW9
MGW11
MGW13
MGW15
MGW 17
MGW 19
MGW 21
MGW 23
MGW 25
MGW 27
MGW 29
MGW 31
MGW 33
Sample ID
WQI
Excellent
Good water
Poor Water

Asmoli

Groundwater Quality

47 groundwater samples were collected from borewells, hand pumps and tube-wells located in and around 17 villages. All samples were analyzed for general parameters. Analysis of heavy metals were carried out for 35 samples. DSM unit discharge into Sot river, flowing within 100 m distance in south east direction of the unit. Considering the contour gradient of study area towards flow direction of Sot river, villages located at the upstream of DSM unit discharge point may be considered as having less potential of impact of any discharge on ground water and villages located downstream of DSM discharge point may be considered having high potential of ground water contamination due to any discharge from industrial unit. The groundwater samples were compared with the prescribed specification of ionic concentration in groundwater by WHO standards (1996).

The determination of Physio-chemical parameters of groundwater samples was carried out by standard protocol given by APHA, 2012.

Out of 47 groundwater samples twenty one samples (AGW4, AGW5, AGW29, AGW30, AGW31, AGW32, AGW33, AGW34, AGW35, AGW36, AGW37, AGW38, AGW39, AGW40, AGW41, AGW42, AGW43, AGW44, AGW45, AGW46 and AGW47) located at upstream of the unit; twenty two samples (AGW1, AGW2, AGW3, AGW8, AGW9, AGW10, AGW11, AGW12, AGW13, AGW14, AGW17, AGW18, AGW19, AGW20, AGW21, AGW22, AGW23, AGW24, AGW25, AGW26, AGW27 and AGW28) located at downstream side of the unit and four samples (AGW6, AGW7, AGW15 and AGW16) located within one km radial periphery of the unit.

Physio-chemical Characterization

The pH of the groundwater in the study area is neutral in both upstream and downstream and it varied from 7.1 to 8.0, falls into pH range of natural water (6.5 - 8.5).

The total dissolved solids content of groundwater in the upstream side varied from 196 to 1142 mg/l, 226 to876 mg/l in downstream side and 230 to 544 mg/l within one km radial periphery of the unit. According to the classification of groundwater on the basis of TDS (Ahouansou et al., 2018), 29.79% of the total groundwater samples are of excellent water quality (<300 mg/l), 51.06% of good water quality (300-600 mg/l), 17.02% of fair water quality (600-900 mg/l) and 2.13% of poor water quality (900-1200 mg/l), indicates that groundwater quality of the area is under excellent to fair in terms of TDS.

Table- Classification of water quality on the basis of total dissolved solids

TDS Value (mg/l)	Water Quality	No of Samples	Percentage of Samples
<300	Excellent	14	29.79
300 - 600	Good	24	51.06

600 - 900	Fair	8	17.02
900 -1200	Poor	1	2.13
>1200	unacceptable	0	0.00

Groundwater classification based on total hardness (TH) values, as TH<75 mg/l, 75-150 mg/l, 150-300 mg/l and >300mg/l, designated as soft, moderately hard, hard and very hard respectively (Sawyer and McCarty,1967). Thus, 2.13% samples belong to moderately hard water, 46.81% to hard water and rest 51.06% samples comprises very hard water. The result indicates that the groundwater quality in the study area is hard to very hard.

Alkalinity has direct relation with hardness and pH of the groundwater. It ranged from 143 to 465 mg/l in upstream side samples, 167 to 527 mg/l in downstream side of sample and 167 to 402 mg/l within 1 km radial periphery of the unit.

Table - Classification of water quality on the basis of total hardness

TH Value (mg/l)	Water Quality	No of Samples	Percentage of Samples
<75	soft	0	0
75-150	moderately hard	1	2.13
150-300	hard	22	46.81
>300	very hard	24	51.06

Colour was not found in of the samples. COD varied from BDL to 72 mg/l in upstream side and BDL to 21 mg/l in downstream side and BDL to 45 mg/l within one km radial periphery of the unit. The chloride concentration varied from 4 to 215 mg/l in upstream of the unit, 5 to 132 mg/l in downstream side and 12 to 200 mg/l in one km radial periphery of the unit. Fluoride concentration varied from BDL to 0.3 mg/l in upstream side, BDL to 1.2 mg/l in downstream and 0.2 to 0.4 mg/l within one km radial periphery of the unit. Sulphate concentration varies from 5 to 208 in upstream side, 5 to 456 mg/l downstream side and 17 to 73 mg/l in one km radial periphery on the unit. Nitrate concentration varied from BDL to 12.9 mg/l in upstream side as well downstream side and 0.3 to 1.4 mg/l in one km radial periphery on the unit.

The heavy metal concentration of As, Co, Cr, Cu, Ni and Pb were mostly below detectable limit or below WHO standard. Concentration Fe varied from BDL to 13.1 mg/l in upstream, BDL to 107 in downstream and BDL to 5.03 mg/l within one km radial periphery of the unit. Manganese varied from BDL to 1.13 mg/l in upstream, BDL to 2.56 mg/l in downstream and BDL to 1.15 mg/l in one km radial periphery of the unit. Similarly, Zinc varied from BDL to 3.5 mg/l in

upstream, BDL to 6.7 mg/l in downstream and BDL to 0.8 mg/l in one km radial periphery on the unit.

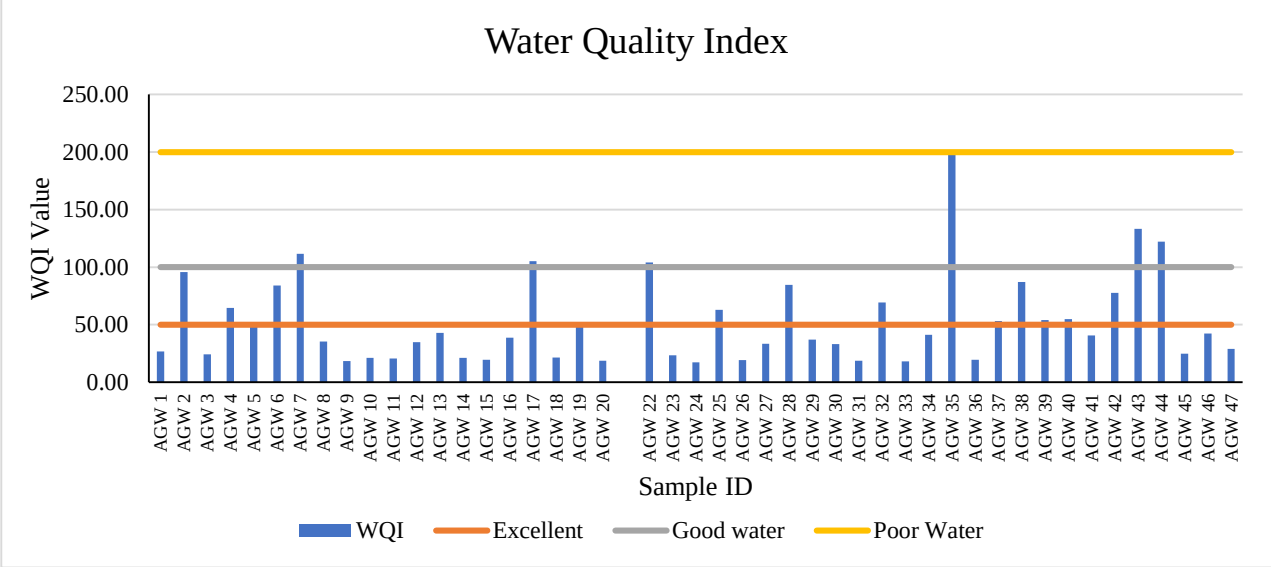
Groundwater Quality

Table - Water quality classification based on WQI value

WQI value	Water quality	Number of Samples	Percentage of water samples
<50	excellent	28	59.57
50-100	good water	12	25.53
100-200	poor water	6	12.77
200-300	very poor water	0	0.00
>300	Water unsuitable for drinking	1	2.13

Groundwater quality index were calculated based on Ramakrishnaiah et al. 2009. For quality rating BIS standard as reference concentration were taken in calculation and for parameter were limits are in certain range, the higher value of the BIS standard was taken into consideration.

Groundwater quality index suggest that around 59.57% of sample collected is of excellent water quality, 25.53% of good water quality, 12.77% of poor water quality and 2.13% of water unsuitable for drinking purpose indicates that groundwater quality falls under excellent to poor water quality in term of water quality index.



#Water quality index value of - AGW21 is 1386 which comes under unsuitable for drinking purpose.

Dhampur

Groundwater Quality

53 groundwater sample were collected from 29 village. All samples were analysed for general parameter and analysis for heavy metals were carried out for 37 samples. Ikra drain flows west of the DSM unit and Preshak canal flows east of DSM unit around 2 Km from the unit. Both Ikra drain and Preshak canal flows from north to south. Considering contour gradient of the study area towards flow direction from north to south, villages/locations located at the upstream of DSM unit may be considered as having less potential of impact of any discharge on ground water and villages located downstream of DSM discharge point may be considered having high potential of ground water contamination due to any discharge from industrial unit. The groundwater sample were compared with prescribed specification of ionic concentration in groundwater by WHO standards (1996).

The determination of Physio-chemical parameters of groundwater samples was carried out by standard protocol given by APHA, 2012.

Out of 53 groundwater samples twenty five samples (DGW13, DGW14, DGW15, DGW16, DGW17, DGW18, DGW19, DGW20, DGW21, DGW22, DGW23, DGW24, DGW25, DGW26, DGW27, DGW28, DGW29, DGW30, DGW31, DGW32, DGW33, DGW35, DGW36, DGW37 and DGW38) located at upstream of the unit; twenty four samples (DGW1, DGW2, DGW3, DGW4, DGW5, DGW6, DGW7, DGW8, DGW9, DGW39, DGW40, DGW41, DGW42, DGW43, DGW44, DGW45, DGW46, DGW47, DGW48, DGW49, DGW50, DGW51, DGW52 and DGW53) located at downstream side of the unit and four samples (DGW10, DGW11, DGW12 and DGW34) located within one km radial periphery of the unit.

Physio-chemical Characterization

The pH of the groundwater in the study area is neutral in both upstream and downstream and it varied from 7.0 to 8.0, falls into pH range of natural water (6.5 - 8.5).

The total dissolved solids content of groundwater in the upstream side varied from 202 to 768 mg/l, 198 to 1480 mg/l in downstream side and 298 to 620 mg/l within one km radial periphery of the unit. According to the classification of groundwater on the basis of TDS (Ahouansou et al., 2018), 58.49% of the total groundwater samples are of excellent water quality (<300 mg/l), 30.19% of good water quality (300-600 mg/l), 9.43% of fair water quality (600-900 mg/l) and 1.89% of unacceptable water quality (>1200 mg/l), indicates that groundwater quality of the area is under excellent to fair in terms of TDS.

Table- Classification of water quality on the basis of total dissolved solids

TDS Value (mg/l)	Water Quality	No of Samples	Percentage of Samples
<300	Excellent	31	58.49

300 - 600	Good	16	30.19
600 - 900	Fair	5	9.43
900 -1200	Poor	0	0.00
>1200	unacceptable	1	1.89

Groundwater classification based on total hardness (TH) values, as TH<75 mg/l, 75-150 mg/l, 150-300 mg/l and >300mg/l, designated as soft, moderately hard, hard and very hard respectively (Sawyer and McCarty,1967). Thus, 54.72% to hard water and rest 45.28% samples comprises very hard water. The result indicates that the groundwater quality in the study area is hard to very hard.

Alkalinity has direct relation with hardness and pH of the groundwater. It ranged from 174 to 562 mg/l in upstream side samples, 178 to 554 mg/l in downstream side of sample and 283 to 407 mg/l within one km radial periphery of the unit.

Table - Classification of water quality on the basis of total hardness

TH Value (mg/l)	Water Quality	No of Samples	Percentage of Samples
<75	soft	0	0
75-150	moderately hard	0	0
150-300	hard	29	54.72
>300	very hard	24	45.28

Colour was not found in of the samples. COD varied from BDL to 9 mg/l in upstream side and BDL to 8 mg/l in downstream side and BDL to 9 mg/l within one km radial periphery of the unit. The chloride concentration varied from 8 to 194 mg/l in upstream of the unit, 8 to 236 mg/l in downstream side and 18 to 78 mg/l in one km radial periphery of the unit. Fluoride concentration varied from BDL to 0.7 mg/l in upstream side, BDL to 0.6 mg/l in downstream and 0.3 to 0.4 mg/l within one km radial periphery of the unit. Sulphate concentration varies from BDL to 72 mg/l in upstream side, BDL to 297 mg/l downstream side and 10 to 101 mg/l in one km radial periphery on the unit. Nitrate concentration varied from BDL to 6.4 mg/l in upstream side, BDL to 13 mg/l in downstream side and BDL to 9 mg/l in one km radial periphery on the unit.

The heavy metal concentration of As, Co, Cr, Cu, Ni and Pb were mostly below detectable limit or below WHO standard. Concentration Fe varied from BDL to 16.7 mg/l in upstream, BDL to 4.08 mg/l in downstream and BDL to 7.85 mg/l within one km radial periphery of the unit. Manganese varied from BDL to 0.99 mg/l in upstream, BDL to 0.92 mg/l in downstream and BDL to 1 mg/l in one km radial periphery of the unit. Similarly, Zinc varied from BDL to 2.96

mg/l in upstream, BDL to 0.32 mg/l in downstream and BDL to 0.34 mg/l in one km radial periphery on the unit.

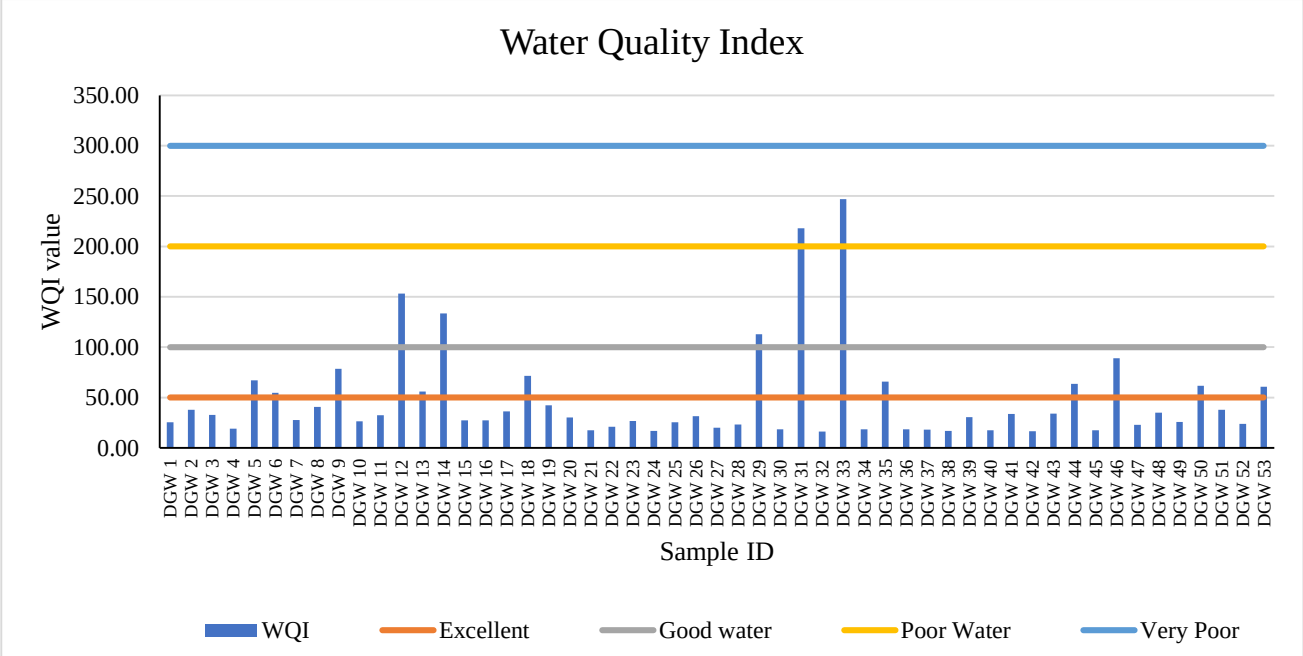
Groundwater Quality

Table - Water quality classification based on WQI value

WQI value	Water quality	Number of Samples	Percentage of water samples
<50	excellent	38	71.70
50-100	good water	10	18.87
100-200	poor water	3	5.66
200-300	very poor water	2	3.77
>300	Water unsuitable for drinking	0	0.00

Groundwater quality index were calculated based on Ramakrishnaiah et al. 2009. For quality rating BIS standard as reference concentration were taken in calculation and for parameter where limits are in certain range, the higher value of the BIS standard was taken into consideration.

Groundwater quality index suggest that around 71.7% of sample collected is of excellent water quality, 18.87% of good water quality, 5.66% of poor water quality and 3.77% of very poor water quality indicates that groundwater quality falls under excellent to poor water quality in term of water quality index.


Water Quality Index
WQI value
350.00
300.00
250.00
200.00
150.00
100.00
50.00
0.00
DGW 1
DGW 2
DGW 3
DGW 4
DGW 5
DGW 6
DGW 7
DGW 8
DGW 9
DGW 10
DGW 11
DGW 12
DGW 13
DGW 14
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DGW 36
DGW 37
DGW 38
DGW 39
DGW 40
DGW 41
DGW 42
DGW 43
DGW 44
DGW 45
DGW 46
DGW 47
DGW 48
DGW 49
DGW 50
DGW 51
DGW 52
DGW 53
Sample ID
WQI
Excellent
Good water
Poor Water
Very Poor

References:

APHA (1998) Standard Methods for the examination of water and waste water American Public Health Association.

Ahouansou, D. Mathieu Maurice, et al. "Analysis of the Seasonal Variation of Groundwater Quality in a Highly Cultivated Catchment, Northern Benin." *American Journal of Water Resources* 6.6 (2018): 224-234.

Ramakrishnaiah, C. R., C. Sadashivaiah, and G. Ranganna. "Assessment of water quality index for the groundwater in Tumkur Taluk, Karnataka State, India." *E-Journal of chemistry* 6.2 (2009): 523-530.

Sawyer, C.N., McCarty, P.L. (1967). Chemistry for sanitary engineers (2nd ed.). New York: McGraw-Hill Education

CSIR- National Environmental Engineering Institute, Hyderabad Zonal centre (2002). Assessment of the Groundwater and Soil around the Murdhawa Industrial Site, Renukoot, Sonebhadra

Annexure-1

From,

District Agriculture Officer

Bareilly

To,

The Regional Officer

UP Pollution Control Board

Bareilly

Letter No. 1531/4-Agriculture/Camp O. Bilwa/RA.H.A/2021-22 Dated 23-3-22

Sir,

Kindly refer to your office Letter No.-1129/ O.A..NO.-539/19/ 2022 dated 21.03.2022, in continuation to which, it is to inform you that the Report No.-1418/ Camp O. Bilwa/RA.H.A/2021-22, dated 24.12.2021 was already sent to you on WhatsApp group by the undersigned. The report is being sent again.

Encls. Above report

District Agriculture Officer

Bareilly

-:Report:-

Inspection report in O.A. No. 0539/2019 of Hon'ble National Green Tribunal in respect of joint inspection carried out by Central Pollution Control Board, U.P. and various concerned departments on 15. 11.2021 and 16.11.2021 for assessment of environmental damage done by M/s Dhampur Sugar Mill Ltd., Mirganj Bareilly:

In compliance with the directions issued in OA to 0539/2019 by Hon'ble National Green Tribunal for assessment of environmental damage in respect of the above mentioned industry, M/s Dhampur Sugar Mill Ltd., Mirganj Bareilly, a Joint Committee was constituted vide letter dated 29.09.2021 of the Central Pollution Control Board, and vide letter No.-686 / OA No.-539/2019/2021 dated 26.10.2021 of District Magistrate, Bareilly, a meeting district level officers in connection with the matter was convened on 12.11.2021 under the chairmanship of Additional District Magistrate (City) Bareilly. In compliance with the instructions given in this meeting, meeting convened with the Central Pollution Control Board, the undersigned along with the Central Pollution Control Board, U.P. Plooution Control Board and other associated departments carried out survey and collected soil samples from nearby villages of M/s Dhampur Sugar Mill Ltd., Meerganj, Bareilly i.e. Sindhauli, Jainer, Khamaria Sani, Narkheda, Mandanpur, Sahjana, Mirganj and Nagaria Sadat etc. Point wise report is as follows:-

1. During the survey, the industry named M/s Dhampur Sugar Mill Ltd., Meerganj, and Bareilly in nearby villages such as Singhauli, Jainer, Khamaria Sani, Narkheda, Mandanpur, Sahjana, Mirganj and Nagaria Sadat etc. no evidence was found regarding the factors causing the harm to harvested crops / agricultural products from the above mentioned industries. No complaint has been received from the local farmers in this regard so far.

2. During the survey, 22 soil samples were collected and 22 soil samples were tested in the soil testing laboratory, according to the test report, the parameters of all the soil samples were found normal in nature. Soil test reports have been sent directly to Pollution Control Board Bareilly by Soil Testing Laboratory, Bilwa, Bareilly. The pH of the soil is generally normal.

3. There is about 2850 hectares of agricultural land in Singhauli, Jainer, Khamaria Sani, Narkheda, Mandanpur, Sahjana, Mirganj and Nagaria Sadat etc. located around the mentioned industry. Rabi / Kharif and Zayed crops are mainly harvested on the above agricultural land along with the cultivation of sugarcane. Crop surveys are conducted by this office from time to time. During the survey, no evidence was received from the above industry regarding any loss of agricultural land/crops for the last five years. According to the office records, the production of crop in the above area was normal at present as compared to the previous years. As per above mentioned facts, the report is submitted for your perusal in advance for necessary action.

(Dhirendra Singh Chaudhary)
District Agriculture Officer
Bareilly

418/ Camp O. Bilwa/RA.H.A/2021-22, dated 24.12.2021

Copy to

Regional officer, Central Pollution Control Board, Bareilly

Annexure-2

Office of District Cane Officer, Bareilly

Letter No.: 2771 / Purchase-4/2021-22 / Date : 29 March 2022

Regional officer

UP Pollution Control Board,

Bareilly

Subject:- Regarding ensuring compliance of the instructions given by the Central Pollution Control Board in the meeting convened on 15.03.2022 through video conferencing in compliance with the order dated 01.09.2021 issued in connection with the O.No.539/2019 Aadi Ansari Vs M/s. Dhampur Sugar Mills Ltd. and others filed with the Hon'ble National Green Tribunal .

In the above mentioned matter, the Central Pollution Control Board with various departments of District Bareilly has conducted the environmental impact analysis on 15.11.2021 and 16.11.2021 in adjoining areas of M/s Dhampur Sugar Mills ltd. Mirganj. During the above analysis, the report is related to the change in the rate of crop production in the surrounding areas of the said industry and the quantity of production of different years of the crop.

In relation to the above context, the information received from the Meerganj Council and the statistics section of the office for the last five years in relation to the area and production of sugarcane in Mirganj area by the Sugarcane Development Department is submitted for further action as follows:

S. no.	Name of Sugar Mill	Name of Council	2021-22		2020-21		2019-20		2018-19		2017-18	
			Sugarcane area (Hectare)	Sugarcane production (Lakh Quintalls@771.88/het.)	Sugarcane area (Hectare)	Sugarcane production (Lakh Quintalls@771.88/het.)	Sugarcane area (Hectare)	Sugarcane production (Lakh Quintalls@771.88/het.)	Sugarcane area (Hectare)	Sugarcane production (Lakh Quintalls@771.88/het.)	Sugarcane area (Hectare)	Sugarcane production (Lakh Quintalls@771.88/het.)
1.	Mirganj	Mirganj	10383	80.14	9550	73.42	9215	68.87	11089	88.81	9433	65.23

Annexure-3

Office of Chief medical officer, Bareilly

Letter no. CMO/Env. Haz/2021-2022/n date- 27.12.2021

To

Regional officer

UP Pollution Control Board,

Bareilly

Subject:- Regarding the report of Joint inspection conducted by CPCB and UPPCB and various other related departments on 15.11.2021 and 16.11.2021 for the analysis of the environment damage caused by M/s. Dhampur Sugar Mills Ltd., Mirganj, in connection with OA no. 539/2019 filed in Hon;ble NGT.

In relation to the above subject, directions were issued regarding assessment of environmental damage through OA.NO 539/2019 of the Hon'ble National Green Tribunal in respect of M/s Dhampur Sugar Mill Limited, Mirganj, Bareilly. In compliance with these directions, a joint committee was constituted vide Central Pollution Control Board's letter dated 29.09.2021. In compliance of DM's letter Bareilly, letter no. 686/OA No. 539/2019/2021 dated 26.10.2021, a meeting was held on 12.11.2021 under the chairmanship of Additional District Magistrate (City) Bareilly with district level officers in respect of the above matter. In compliance with the instructions given in this meeting, the undersigned has conducted health related surveys were conducted on 15.11.2021 and 16.11.2021 about 08 villages (Sindhauli, Jainor, Khamaria Sani Narkheda, Mandanpur, Sahjana, Mirganj Nagaria Sadat) located around M/s Dhampur Sugar Mill

Limited, Meerganj, Bareilly. During the survey, no adverse effect of any kind on the health of the local residents residing in the nearby villages was noticed from the above mentioned industry and as per the office records, no information is available in the office in the past.

The report is submitted for necessary action

Annexure-4

From

The Chief Veterinary Officer,

Bareilly.

To

Regional Officer Pollution Control Board, Bareilly.

letter no. 2152/.. 2021-22, dated 17-12-2021

Subject - Regarding the report of Joint inspection conducted by CPCB and UPPCB and various other related departments on 15.11.2021 and 16.11.2021 for the analysis of the environment damage caused by M/s. Dhampur Sugar Mills Ltd., Mirganj, in connection with OA no. 539/2019 filed in Hon'ble NGT.

Please refer the aforementioned subject. The Joint inspection was conducted by CPCB and UPPCB and various other related departments on 15.11.2021 and 16.11.2021 for the analysis of the environment damage caused by M/s. Dhampur Sugar Mills Ltd., Mirganj, in connection with OA no. 539/2019 filed in Hon'ble NGT, the report related to this office is being attached and sent for necessary action in advance.

Sincerely,

(Dr. Lalit Kumar Verma)

Chief Veterinary Officer,

Bareilly.

The Report regarding the Joint inspection conducted by CPCB and UPPCB and various other related departments on 15.11.2021 and 16.11.2021 for the analysis of the environment damage caused by M/s. Dhampur Sugar Mills Ltd., Mirganj, in connection with OA no. 539/2019 filed in Hon'ble NGT.

In relation to the above subject, directions were issued regarding assessment of environmental damage through OA.NO 539/2019 of the Hon'ble National Green Tribunal in respect of M/s Dhampur Sugar Mill Limited, Mirganj, Bareilly. In compliance with these directions, a joint committee was constituted vide Central Pollution Control Board's letter dated 29.09.2021. In compliance of DM's letter Bareilly, letter no. 686/OA No. 539/2019/2021 dated 26.10.2021, a meeting was held on 12.11.2021 under the chairmanship of Additional District Magistrate (City) Bareilly with district level officers in respect of the above matter. In compliance with the instructions given in this meeting, the undersigned has conducted health related surveys were conducted on 15.11.2021 and 16.11.2021 in the villages located around M/s Dhampur Sugar Mill Limited, Meerganj, Bareilly. During the survey, no adverse effect of any kind on the health of animals/cattles being reared by the local residents residing in the nearby villages was noticed from the above mentioned industry. No evidence was found about the environment damage from the said industry.

The report is being attached and sent for necessary action in advance.

Chief Veterinary Officer,

Bareilly.

Annexure-5

The Report regarding the Joint inspection conducted by CPCB and UPPCB and various other related departments on 15.11.2021 and 16.11.2021 for the analysis of the environment damage caused by M/s. Dhampur Sugar Mills Ltd., Mirganj, in connection with OA no. 539/2019 filed in Hon'ble NGT.

In relation to the above subject, directions were issued regarding assessment of environmental damage through OA.NO 539/2019 of the Hon'ble National Green Tribunal in respect of M/s Dhampur Sugar Mill Limited, Mirganj, Bareilly. In compliance with these directions, a joint committee was constituted vide Central Pollution Control Board's letter dated 29.09.2021. In compliance of DM's letter Bareilly, letter no. 686/OA No. 539/2019/2021 dated 26.10.2021, a meeting was held on 12.11.2021 under the chairmanship of Additional District Magistrate (City) Bareilly with district level officers in respect of the above matter. In compliance with the instructions given in this meeting, the undersigned has conducted health related surveys were conducted on 15.11.2021 and 16.11.2021 in the villages located around M/s Dhampur Sugar Mill Limited, Meerganj, Bareilly. During the survey, no adverse effect is found of any kind on animals/creature living under water in the ponds located nearby villages and Peelakhar River from the above mentioned industry. No evidence was found about the environment damage from the said industry.

The report is being attached and sent for necessary action in advance.

District Fisheries Officer,

Bareilly.

Annexure-6

The Report regarding the Joint inspection conducted by CPCB and UPPCB and various other related departments on 15.11.2021 and 16.11.2021 for the analysis of the environment damage caused by M/s. Dhampur Sugar Mills Ltd., Mirganj, in connection with OA no. 539/2019 filed in Hon'ble NGT.

In relation to the above subject, directions were issued regarding assessment of environmental damage through OA.NO 539/2019 of the Hon'ble National Green Tribunal in respect of M/s Dhampur Sugar Mill Limited, Mirganj, Bareilly. In compliance with these directions, a joint committee was constituted vide Central Pollution Control Board's letter dated 29.09.2021. In compliance of DM's letter Bareilly, letter no. 686/OA No. 539/2019/2021 dated 26.10.2021, a meeting was held on 12.11.2021 under the chairmanship of Additional District Magistrate (City) Bareilly with district level officers in respect of the above matter. In compliance with the instructions given in this meeting, the undersigned has conducted health related surveys were conducted on 15.11.2021 and 16.11.2021 in the villages located around M/s Dhampur Sugar Mill Limited, Meerganj, Bareilly. During the survey, no adverse effect is found on the parks and gardens located in villages (Sindhauli, Jainor, Khamaria Sani Narkheda, Mandanpur, Sahjana, Mirganj Nagaria Sadat) from the above mentioned industry. No evidence was found about the environment damage from the said industry.

The report is being attached and sent for necessary action in advance.

District Horticulture Officer,

Bareilly.

Annexure-7

The Report regarding the Joint inspection conducted by CPCB and UPPCB and various other related departments on 15.11.2021 and 16.11.2021 for the analysis of the environment damage caused by M/s. Dhampur Sugar Mills Ltd., Mirganj, in connection with OA no. 539/2019 filed in Hon'ble NGT.

In relation to the above subject, directions were issued regarding assessment of environmental damage through OA.NO 539/2019 of the Hon'ble National Green Tribunal in respect of M/s Dhampur Sugar Mill Limited, Mirganj, Bareilly. In compliance with these directions, a joint committee was constituted vide Central Pollution Control Board's letter dated 29.09.2021. In compliance of DM's letter Bareilly, letter no. 686/OA No. 539/2019/2021 dated 26.10.2021, a meeting was held on 12.11.2021 under the chairmanship of Additional District Magistrate (City) Bareilly with district level officers in respect of the above matter. In compliance with the instructions given in this meeting, the undersigned has conducted health related surveys were conducted on 15.11.2021 and 16.11.2021 in the villages located around M/s Dhampur Sugar Mill Limited, Meerganj, Bareilly. During the survey, no adverse effect is found on the plants and trees growing in villages (Sindhauli, Jainor, Khamaria Sani Narkheda, Mandanpur, Sahjana, Mirganj Nagaria Sadat) from the above mentioned industry. No evidence was found about the environment damage from the said industry.

The report is being attached and sent for necessary action in advance.

Forest Officer,

Bareilly.

Annexure - 8A

Office of Executive Engineer,

Ground Water Department, Block- Moradabad,

Near B-161/ 4 Jigar Vihar Colony,

Civil Lines, Moradabad

Letter No:86/GWDB-Mora/T-4 Dated: 29 December, 2021

Subject: Order No.-539/2019 (R.A. N0-376/2020) passed by Hon'ble National Green Tribunal, New Delhi in O.A. No.539/2019 Adil Ansari vs. M/s Ghampur Sugar Mills & Ors. regarding the inquiry report of joint inspection by the Committee constituted in compliance with R.E.G.I.

Regional Officer Uttar Pradesh Pollution Control Board Moradabad.

Please refer to the above subject and your letter no.-1837/1837. N-13/539/2019/General dated 21-12-2021. In the meantime, the Point No. 4 of the concerned letter was jointly inspected by the Committee in the order and the Government Gazette published by the Government of Uttar Pradesh, Namami Gange and Rural Water Supply Section-3 No. 331/76-3-2020-13, N.G./2020, Lucknow, dated 17.06.2020, the development block of Sambhal district - Asmoli area has been declared as a notified area. (Photocopy attached), Public Notice No.-16 of Central Ground Water Authority 2021, New Delhi dated - 12-10-2021, the said development block has been classified in semi critical category (photocopy enclosed) and pre and post monsoon ground water level measurement data of development block Asmoli the average ground water measurement level of the last 05 years is 17.34 meters. (Photocopy attached).

Enclosures - As Above.

Assistant Engineer

Ground Water Department, Block - Moradabad

Letter No. GWD B- Moradabad/Dated.

Copy- District Officer, Sambhal for information.

Assistant Engineer

Ground Water Department, Block - Moradabad

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GROUND WATER DEPARTMENT UP DIVISION-MORADABAD
WATER TABLE LEVEL (BGL) (in Meter) From 2017 to 2021 Pre and Post Mansoon
(Block-Asmoli, District-Sambhal)

DISTRICT	LOCKLOCK	HYDROGRAPH STATION	PRM_17	PTM_17	PRM_18	PTM_18	PRM_19	PTM_i9	PRM_20	PTM_20	PRM_21	PTM 21	Avg WL Per Hydrograph Station (Meter)
SAMBHAL	ASMOLI	AICHORA KAMBHOH	-	-	-	19.45	-	20.65	21.40	21.15	22.90	22.78	21.39
SAMBHAL	ASMOLI	ASMOLI	16.29	-	-	-	-	-	-	-	18.25	17.75	17.43
SAMBHAL	ASMOLI	DABOIKHUDR	15.75	15.50	18.05	16.50	17.10	17.68	18.40	18.80	23.15	19.95	18.09
SAMBHAL	ASMOLI	GNGADASHPUR*	16.95	16.45	18.55	16.85	17.15	17.62	18.55	16.85	19.52	19.55	17.80
SAMBHAL	ASMOLI	HARTHALA	15.85	15.60	16.40	16.00	16.10	15.90	17.20	17.85	18.50	18.28	16.77
SAMBHAL	ASMOLI	MANAUTA*	15.81	15.60	17.11	15.30	17.30	16.15	17.18	17.05	17.82	17.68	16.70
SAMBHAL	ASMOLI	SAHWAJPUR*	11.28	11.10	16.83	15.80	15.70	15.90	17.20	17.16	17.89	17.55	15.62
SAMBHAL		MALPUR	13.40	13.15	14.55	13.60	13.80	14.18	14.80	14.92	15.60	15.03	14.30
SAMBHAL	ASMOLI	KHASPURR	16.25	16.00	17.55	16.60	16.60	17.10	17.82	18.34	18.92	18.80	17.40
SAMBHAL	ASMOLI	VIKAS KHAND (NHP)	-	-	-	-	-	-	-	-	18.07	17.76	17.92
Average Ground Water Level Data Last Five Year 2017-2021 Pre &Post Mansoon (Block-Asmoli, District Sambhal) In Meter													17.34

Sd/-

Vivek Kumar

Jr. Engineer

Sd/-

Saurabh sah

Asstt. Engineer

Annexure - 8B

From,

Executive Engineer,

Ground Water Department, Block - Moradabad.

To,

Regional Officer,

U.P. Pollution Control Board, Moradabad.

Letter No: 46/GWD Block-Moradabad/NGT Date/Moradabad/05thMay, 2022

Subject: - Joint Survey of M / S Dhampur Sugar Mills Ltd , Asmoli District - Sambhal in compliance to Hon ble NGT order Dated - 01-09-2021 in the matter of Adil Ansari Vs Dhampur Sugar Mills in O.A. N0.539 / 2019 reg .

Sir,

Please refer to the above subject in letter no. 387/2007 of The District Magistrate Sambhal (Bahjoi). Letter No. -387/N/13/539/2019/ General, dated - 18-04-2022. As per the draft report submitted by the Central Pollution Control Board, the collected sample of ground water of 17 villages around block Asmauli was analyzed. The said draft report has been amended by the Ground Water Department on three points.

Enclosures - As Above.

Assistant Engineer

Ground Water Department, Block - Moradabad

Letter No. GWD B- Moradabad/Dated.

Copy- Forwarded to District Officer, Bahjoi for information.

Assistant Engineer

Ground Water Department, Block - Moradabad

Observation based on interaction with farmers on ground water:

303

Residents from Ramnagar Village, located at right bank of river Sot, around 1 km D/s direction of DSM unit, raised the issue of ground water pollution & yellow colour in the village and diseases like Jaundice etc. caused due to consumption of polluted/contaminated ground water. Analysis results of total seven ground water samples collected from Ramnagar village show TDS in range of 230-742 mg/l, Iron in the range of 1.14-6.30 ppm & Manganese as 0.01-1.15 ppm. COD in the range of 7-45 mg/l is also detected in all groundwater samples collected from village indicating the presence of organic matter in the ground water. TDS Higher than WHO prescribed limit observed at four locations namely AGW1, 2, 3 & 6. High COD observed in the samples namely AGW 4 (28 mg/l), AGW 5 (24 mg/l) and AGW 6 (45 mg/l) collected at a depth of 200-220 ft. from close proximity of right bank for river Sot. It was further noted that at these sampling locations, higher concentration of COD along with chloride and Mn was also observed. Chloride is often the most serious source of interference in COD determination. This indicates the possible impact of industrial pollution or domestic wastewater as the Sot River downstream of DSM, Asmoli carries only partially/ untreated effluent and sewage. As reported by the villagers the cases of Jaundice is of concern, however the cause of this possibly is drinking water contaminated with Hepatitis virus which is unlikely to due to industrial discharge. **(Point add a report page number 45)**

Conclusion of survey conducted in Asmoli, District Sambhal

2. The changes in colour of groundwater water to yellow after few minutes of storing might be due to oxidation of iron and manganese present in groundwater. The sources of these pollutants seems to be geogenic in origin. The geology of the area seems to have influence on groundwater parameters. The COD values also possibly get influenced by higher concentration of chloride and Mn concentrations. Further, the excessive use of pesticides and fertilizers in the area coupled with overexploitation of the ground water also may have contributed to the higher values of COD and Ammoniacal nitrogen. **(Point add a report page number 54)**

Recommendations

- The contamination in Ground Water has been observed at shallow depth handpumps/borewells, hence it is recommended that Jal Nigam, Jalkal Department & Nalkoop Vibhag may be asked to look into the matter, and arrangement for deep borewell shall be made. **(Point add a report page number 82)**

Annexure-9

From

The District Horticulture Officer

Sambhal

To,

Regional officer

Regional Office, U.P. pollution control board,

Housing Development Colony, Budhi Bihar, Moradabad.

Letter No: 832/Garden/2021-22/Dated: 29.12.2021

Subject: NGT order dated 1st September 2021 regarding Adil Ansari v/s Dhampur Sugar Mills-Asmauli.

Sir,

In pursuance of your letter no. 1837/N-13/539/2019/General/Dated 21.12.2021 on the above subject, it is to be informed that M/s Dhampur Sugar Mills Ltd. located in the development block Asmauli. (Sugar and Asvarna Unit) The data related to the Horticulture Department mentioned in the joint inspection of Asmauli district Sambhal dated 17 and 18.12.2021 has been sent for necessary action as per the following details.

1. The area under horticulture in the development block Asmauli is 600 to 700 Hectare.

2. The area under Shekwani in the development block Asmauli is 500 to 600 Hectare.

The organic crops grown in a radius of 5 km of Dhampur Sugar Mills Ltd are following-

1. Number of Villages - 40

2. Area of potato - 400-450 Hectare

3. Area of vegetable - 20 Hectare.

4. Area of mango - 63 Hectare.

5. Area of Guava - 3.2 Hectare.

The operation time of sugar mill is from November to April, this does not have any adverse effect on the production of our fruit crops because in mango crop the time of blossom starts from the month of February and the mango starts to grow in the month of March and By the month of April, the size of mango is small, due to which it does not have any effect on the mango crop. Similarly, the smoke of sugar mill does not have much effect on the cultivation of potatoes and vegetables. No complaint has ever been received from the farmers of the development block Asmauli area in this regard. The report is sent for information and necessary action.

Sincerely

District Horticulture Officer

Annexure-10

Office of chief executive fishery officer, Sambhal

Letter No: 662/Writ/2021-22 Dated: 29/12/2021

To,

Regional Officer,
U.P. Pollution Control Board,
1/A/INS - 1 Awas Vikas Colony, Buddha Vihar
Delhi Road, Moradabad.

Subject: Forwarding of Information/Name/Data related to Fisheries Department in Dhampur Sugar Mill Asmauli District Sammal.

Sir,

It is to be noted that During the joint inspection of M/s. Dhampur Sugar Mill (Sugar and Distillation Unit) Asmauli district on 17.11.2021 and 18.11.2021, there has been no adverse effect on the fish growing in the ponds related to the area of by the Fisheries Department District Sambhal, nor has any complaint related to fisheries been received against the said sugar factory from the concerned area.

Yours Sincerely,

Chief Executive Officer
Fishery Department, Sambhal

Annexure-11

Office In-charge Medical Officer P.S.K. Dhampur District Bijnor

Letter No.- PHC/KNP/2021-22/65/Amended Report Dated: 22.12.2001

To,

Chief Medical Officer
District Bijnor

Subject: HON BLE NGT ORDER DATED 1 , SEPTEMBER , 2021 IN THE MATTER OF ADIL ANSARI V / S M / S DHAMPUR SUGAR MILLS & Ors (O.A. NO.539 (I.A.NO.376 / 2020) reg .

Sir,

This is to inform you that the Letter No. B 19123/QM - II / LEGAL / NGT - 6 / CPCB/2020-21 Dated- 10.12.2021 of the Central Pollution Control Board- Delhi is received in this office on 15.12.202 through office of District Officer Bijnor Pathak Letter No.-1841/ERK. The O.A. No.-539/2019 Adil Ansari vs. Dhampur Sugar Mill Ltd., registred in the Hon'ble National Green Tribunal, New Delhi. It is to inform you that in compliance with order no. dated 01.09.2021 you are informed that

the report of the Health Department is about the crushing season of Dhampur Sugar Mill which is from November to May and non-crushing season which is from June to October. the number of patients seen in PHC and CHC Dhampur were mostly suffering from skin allergy, Cough, respiratory illness, EYE IRRITATION and stomach infection have been found commonly in patients. In this connection, there are 4 patients of itching, 3 stomach patients of normal weather cough cold, 02 and 2 patients of itching and redness of eyes were found in nearby villages.

These common and seasonal diseases are found under Dhampur block/tehsil area and have no connection with the environment of Dhampur Sugar Mill.

Chief Medical Officer
Primary Health Center Dhampur

Annexure-12

From:

District Agriculture Officer,
Bijnor.

To,

Regional Officer,
Uttar Pradesh Pollution Control Board,
Bijnor.

Letter No. 1376/4-Agriculture/General/2021-22 / Dated: 22.12.2021

Sir,

Kindly refer to your office letter No. 611/N-20/Gen-2021 dated 18.12.2021 vide which it has been requested to provide information/reports/data related to our department.during the joint inspection on dated 01.12.2021 and 02. 12.2021 of M/s Dhampur Sugar Mills Ltd (Sugar and Distillery Unit) Dhampur Bijnor in compliance with the Order dated 01.09.2021 passed in OA No.-539/2019 Aadil Ansari vs. Dhampur Sugar Mills Ltd. held in the Hon'ble National Green Tribunal, New Delhi.

In this connection, it is to inform that the data of coverage, production and productivity of the district for the last three years related to the department and the analysis report of 29 soil samples (except micronutrient analysis report) made available to the Land Testing Laboratory, Bijnor, on the basis of the report, the soil of the inspected area is suitable for crop production and no adverse effect on crop production was found. Along with this, the crops sown at the time of inspection of the identified area on dated 01 and 02 December 2021 were found to be in normal condition. The above information is being enclosed with the letter and sent for necessary action.

Yours sincerely
Sd/-
District Agriculture Officer, Bijnor.

Endorsement No. /as above dated

Copy to the following for information and necessary action.

1. The Deputy Director of Agriculture, Bijnor.
2. The Chief Development Officer, Bijnor
3. The District Magistrate Sir, Bijnor for favour of his kind perusal.

District Agriculture Officer, Bijnor.

Ground Testing Laboratory, Bijnor
Analysis result of Major Nutrients elements in Soil Samples

Dated: 22.12.2021

S.N.	Lab.No.	Identify farm/ code number	Date of Soil sample deposit	ph Value	Available organic carbon		Available Phosphate		Available potash		E.C.		
					Percentage	Fertility grade	Kg/ H.	Fertility grade	Kg/ H.	Fertility grade	Mi. mahoj/ c.m.	grade	
1	205	N.B/23	03-12-2021	7.300	0.29	L	9	V.L	203.84	M	0.35	Normal	
2	206	AL.B/98	03-12-2021	7.100	0.48	L	9	V.L	412.16	H	0.34	Normal	
3	207	AL.B/90	03-12-2021	7.200	0.21	M	4.50	V.L	157.92	L	0.42	Normal	
4	208	ND.K/93	03-12-2021	7.000	0.56	M	9	V.L	400.96	H	0.31	Normal	
5	209	ND.K/89	03-12-2021	7.700	0.56	L	27	M	143.36	M	0.33	Normal	
6	210	KH.N/59	03-12-2021	7.200	0.49	L	9	V.L	145.60	M	0.42	Normal	
7	211	AJ.D/106	03-12-2021	7.0	0.35	L	18	L	439.04	H	0.41	Normal	
8	212	A.D.I/24	03-12-2021	7.2	0.28	L	18	L	155.68	M	0.32	Normal	
9	213	N.D/123	03-12-2021	6.9	0.21	L	9	V.L	394.24	H	0.34	Normal	
10	214	V.P/151	03-12-2021	7.01	0.25	L	4.50	V.L	119.84	M	0.35	Normal	
11	215	KH.N/01	03-12-2021	6.9	0.24	L	22.50	M	230.72	M	0.37	Normal	

S.N.	Lab.No.	Identify farm/ code number	Date of Soil sample deposit	ph Value	Available organic carbon		Available Phosphate		Available potash		E.C.		
					Percentage	Fertility grade	Kg/ H.	Fertility grade	Kg/ H.	Fertility grade	Mi. mahoj/ c.m.	grade	
12	216	V.P/148	03-12-2021	7.0	0.28	L	13.50	L	234.08	M	0.42	Normal	
13	217	XY-9	03-12-2021	7.0	0.21	L	9	V.L	143.36	M	0.45	Normal	
14	218	XY-10	03-12-2021	7.2	0.35	L	13.50	L	143.36	M	0.49	Normal	
15	219	XY-7	03-12-2021	7.4	0.14	V.L	9	V.L	88.48	L	0.43	Normal	
16	220	XY-6	03-12-2021	7.2	0.28	L	22.50	M	129.92	M	0.33	Normal	
17	221	XY-8	03-12-2021	7.5	0.56	M	27.00	M	179.20	M	0.56	Normal	
18	222	XY-1	03-12-2021	7.5	0.28	K	13.50	V.L	115.36	M	0.53	Normal	
19	223	XY-2	03-12-2021	7.3	0.84	H	67.50	H	552.28	H	0.46	Normal	
20	224	XY-3	03-12-2021	7.6	0.35	L	27.00	M	209.44	M	0.35	Normal	
21	225	XY-4	03-12-2021	7.1	0.63	M	40.50	H	434.56	H	0.40	Normal	
22	226	XY-5	03-12-2021	7.4	0.07	V.L	13.50	L	168.00	M	0.55	Normal	
23	227	D.T.N.5	03-12-2021	7.1	0.14	V.L	49.50	H	209.44	M	0.43	Normal	
24	228	R.P.B.S.	03-12-2021	7.1	0.31	L	18.00	L	170.24	M	0.34	Normal	
25	229	S.P.S	03-12-2021	7.7	0.67	M	45.00	H	173.60	M	0.54	Normal	
26	230	D.H.P.S	03-12-2021	7.2	0.38	K	31.50	M	126.56	M	0.46	Normal	

S.N.	Lab.No.	Identify farm/ code number	Date of Soil sample deposit	ph Value	Available organic carbon		Available Phosphate		Available potash		E.C.		
					Percentage	Fertility grade	Kg/ H.	Fertility grade	Kg/ H.	Fertility grade	Mi. mahoj/ c.m.	grade	
27	231	A.V.S	03-12-2021	7.3	0.53	M	27.00	M	116.48	M	0.37	Normal	
28	232	A.L.S	03-12-2021	7.4	0.28	L	40.50	H	92.96	L	0.41	Normal	
29	233	D.P.S.1	03-12-2021	7.2	0.49	L	36.00	M	204.96	M	0.48	Normal	

Annexure-13

Data related to cover, production and productivity from Kharif year 2018-19 to year 2020-21, District Bijnor

S.No.	Name of Crop	Year	Area (in hectares)	Production (in Metric Ton)	Productivity (T/H)
1	Paddy	2018-19	54482	131629	24.16
		2019-20	57985	153950	26.55
		2020-21	54801	163362	29.81
2	Urad	2018-19	1403	1118	7.82
		2019-20	1646	1472	8.94
		2020-21	1694	1657	9.78
3	Arhar	2018-19	4	3	7.39
		2019-20	6	9	15.00
		2020-21	6	40	6.67
4	Peanuts	2018-19	807	802	9.94
		2019-20	752	2049	27.25
		2020-21	1299	15705	12.09
5	Sesame	2018-19	109	25	2.29
		2019-20	26	5	1.92
		2020-21	14	40	2.86
6	Corn	2018-19	14	30	21.35
		2019-20	88	141	16.02
		2020-21	1	30	30.00

District Agriculture Officer

Bijnor

Data related to cover, production and productivity from Rabi year 2018-19 to year 2020-21

District Bijnor

S.No.	Name of Crop	Year	Area (in hectares)	Production (in Metric Ton)	Productivity (T/H)
1	Wheat	2018-19	148627	557500	37.51
		2019-20	145884	510446	34.99
		2020-21	155416	591669	38.07
2	barley	2018-19	3	9	30.67
		2019-20	4	13	32.50
		2020-21	4	13	32.50
3	Gram	2018-19	14	18	12.51
		2019-20	42	56	13.44
		2020-21	24	29	12.08
4	Pea	2018-19	38	39	10.23
		2019-20	99	121	12.25
		2020-21	82	90	10.97
5	Lentil	2018-19	745	804	8.11
		2019-20	697	949	13.61
		2020-21	900	1235	13.72
6	Mustard / Toria	2018-19	4519	6375	14.11
		2019-20	8005	10038	12.24
		2020-21	26785	25552	9.54

District Agriculture Officer

Bijnor

Data related to cover, production and productivity of Sugercane year 2018-19 to year 2020-21, District Bijnor

S.No.	Name of Crop	Year	Area (in hectares)	Production (in Metric Ton)	Productivity (T/H)
1	Sugercane	2018-19	220368	18941070	859.52
		2019-20	221753	10179860	864.92
		2020-21	247471	21411438	865.21

Sd/-

District Agriculture Officer

Bijnor

From:

District Horticulture Officer,
Bijnor.

To,

The Uttar Pradesh Pollution Control Board,
Regional Office, Maharishi Dayanand Nagar,
Near Saint Mary School, Adampur - Chakkar Road,
Bijnor- 246701

Letter No. 1642
Dated : 24.12.2021
File No. N-20/General

Letter No.: 1135-39/General/2021-22/ Dated: 23-12-2021

□□□□: Hon'ble NGT order dated 1st September 2021 in the matter of Aadil Ansari V/s M/s Dhampur Sugar Mills & Ors (O.A. No. 539/2019 (I.A. No. 376/2020) reg.

Sir,

In continuation to your letter No. 611/&-20/General-2021/ dated 18-12-2021 on the above cited subject, Shri Tribhuvan Kumar, S.I and Shri Arvind Kumar, Assistant Horticulture Inspector office, was directed by the undersigned for joint investigation with the investigation team. Therefore, as per their Investigation Report, it has been informed that prima facie the yield and productivity of the plantations has been found to be normal. In general, negative effects have not been observed.

Yours

Sd/-
(Jitendra Kumar)
District Horticulture Officer
Bijnor

Endorsement No. Dated as above

Copy to:- For favour of kind information and necessary action to the following.

1. The District Magistrate Sir, Bijnor.
2. Member Secretary Sir, UP Pollution Control Board, Lucknow.
3. The Chief Environment Officer (Circle - 1). UP Pollution Control Board, Lucknow.
4. Shri A.K. Vidyarthi, Additional Director and Incharge, WQM-II Central Pollution Control Board] Parivesh Bhawan, East Arjun Nagar, Delhi.

District Horticulture Officer
Bijnor

Annexure-14

Office of the Executive Engineer
Construction Division, U.P. Jal Nigam (Rural),
Near Ladapura Water Works Jhaloo Road, Bijnor (U.P.)
(Tel/Fax: 01342-252649)
E-mail: ee_ bjn_ cdupjn@yahoo.co.in

Letter No.3185/Inspection/37 Dated:- 21-12-2021

To,

Regional Officer,
Uttar Pradesh Pollution Control Board,
Adampur- Chakkar Road Bijnor.

Letter No. 1645
Dated : 24.12.2021
File No. N-20/General

Subject:-- With ref. to your letter No. 611/N-20/General-2021 dated 18.12.2021.

Sir,

The information as desired vide your office letter No. 611/N-20/General-2021 dated 18.12.2021 on the above cited subject is sent to you in the prescribed format.

Attachment: As above.

Yours sincerely,

Sd/-
(Bharat Singh)
Executive Engineer

Endorsement No. and date as above

Copy to:

1. Shri K.K.Sharma, Assistant Engineer.

Executive Engineer

Office of Executive Engineer, Construction Division, U.P. Jal Nigam
Ladapura Jalkal Complex, Jhalu Road, Bijnor
(Water Test Report)

To, Mr. Sandeep Kumar Mahesh
Assistant Engineer
Construction Division, U.P. Jal Nigam, Bijnor
Lab. Register reference: Page No. 24

Tehsil:- Dhampur
Development Block: Alhepur
Date:- 22.11.2016

Report is being sent with reference to your letter No. 146/Water Test/13 dated 12/./17

S.No.	Village/Town/Location	Source	Color	odor	TDS (PPM)	PH	Chemical Test in PPM							note
							chloride	fluoride	total hardness	sulfate	iron	nitrate	alkalinity	
1	Village Alipur Bhikkan, Near Bus Stand Idris	Hand pump	Colorless	Odorless	340	7.5	90	0.5	260	38.4	0.3	2.66	200	Satisfactory
2	Village Jaitra Shiv Mandir	Hand pump	Colorless	Odorless	300	7.5	25	0.1	200	9.6	0.4	8.86	240	Satisfactory
3	Village Taiyab Sarai R.I.M. Jr. H. School	Hand pump	Colorless	Odorless	260	7.1	30	0.3	220	19.2	0.5	4.43	280	Satisfactory
4	Village Bakshanpur At Cemetery	Hand pump	Colorless	Odorless	280	7.8	50	0.2	260	28.8	0.6	16.83	260	Satisfactory
5	Dhampur Sugar Mill Truck Union Office	Hand pump	Colorless	Odorless	300	7.9	40	0.5	280	9.6	0.1	15.06	240	Satisfactory
6	Village Nangla Nancy Near Naubahar Singh	Hand pump	Colorless	Odorless	380	8.1	60	0.4	200	28.8	0.3	4.43	200	Satisfactory
7	Village Sipahiwala Adesh Vidya Mandir School	Hand pump	Colorless	Odorless	420	8.2	20	0.3	240	19.2	0.2	8.86	220	Satisfactory
8	Village Wajidpur Ninddu at the graveyard	Hand pump	Colorless	Odorless	440	8.4	30	0.1	220	9.6	0.3	15.06	240	Satisfactory
9	Village Sarkada Prithviraj Chauhan	Hand pump	Colorless	Odorless	280	8	50	0.2	280	28.8	0.1	11.52	260	Satisfactory

	E. of Education													318
10	Village Sarkada Lalten Wale Baba ke Thale par	Hand pump	Colorless	Odorless	340	8.2	100	0.4	260	38.4	0.4	8.86	280	Satisfactory
11	Village Gombdi Habibwala at the temple of Chamunda Devi	Hand pump	Colorless	Odorless	300	8.5	90	0.5	220	19.2	0.3	4.43	220	Satisfactory
12	At village Berkheda Tada cremation ground	Hand pump	Colorless	Odorless	280	7.9	70	0.6	300	9.6	0.1	8.86	240	Satisfactory

Note - 1 it has been highlighted in excess of the limits mentioned in the CPHEo's standard.
2 Please refer page 2 for Standards
3. Send samples in acidic for iron analysis.

Sd/-
Jr. Engineer

Countersigned
Sd/-
Asstt. Engineer

Office of Executive Engineer Construction Division, UP Jal Nigam
Ladapura Jalkal Prangan, Jhalu Road, Bijnor
(Water Test Report)

To Sh Sandeep Kumar Mahesh,
Assistant Engineer, Construction Division,
UP Jal Nigam, Bijnor

Tehsil - Dhampur
Development Block- Alhepur
Date: 22/11/2016

Reference of Laboratory Register:.....
With reference to your letter No.146/Water Test/13 dated 12/01/17 number report is being sent.

S.No	Village/City/location	Source	Colour	Odour	T.D.S. (PPM)	P.H.	Chemical test in PPM							
							Chloride	Fluoride	Total hardness	Sulphate	Iron	Nitrate	Alkalinity	Remarks
1.	Near Village Amkheda Pramod Kumar	Hand pump	Colourless	Odourless	300	8.2	60	0.1	340	28.8	0.2	11.52	220	
2.	Near Village Amkheda Pravendra Singh	Hand pump	-	-	360	8.5	40	0.2	300	19.2	0.1	8.86	200	Satisfactory
3.	Village Aladdinpur Bhatpura Babu Ex-Pradhan	Hand pump	-	-	420	8.1	50	0.1	320	9.6	0.1	4.43	200	Satisfactory
4.	Village Buderan (Malakpur) on Jamaluddin's Jayarat	Hand pump	-	-	480	7.5	70	0.5	280	28.8	0.4	8.86	280	Satisfactory
5.	Near Village Md Alipur Lalman Udayveer Singh Dealer	Hand pump	-	-	400	7.9	30	0.4	300	19.2	0.3	11.52	300	Satisfactory
6.	Near Village Nurpur Chhibli Jaipal Singh	Hand pump	-	-	280	7.9	20	0.3	260	9.6	0.1	15.06	260	Satisfactory
7.	Near village Hakimpur Medha Suresh	Hand pump	-	-	260	8	80	0.2	300	38.4	0.2	16.83	320	Satisfactory
8.	Village Piparjit in the lounge of Master Dilawar	Hand pump	-	-	240	8.1	70	0.1	340	9.6	0.1	4.43	240	Satisfactory
9.	Village Prithvipur Vanwari Hasinuddin s/o Jamir Ahmed	Hand pump	-	-	400	8.3	50	0.4	240	28.8	0.2	8.86	220	Satisfactory
10.	Village Prithvipur Vanwari Radisa s/o Taslim	Hand pump	-	-	540	8.5	80	0.3	260	19.2	0.3	11.52	200	Satisfactory

Note - 1 it has been highlighted in excess of the limits mentioned in the CPHEo's standard.
2 Please refer page 2 for Standards
3. Send samples in acidic for iron analysis.

Sd/-
Chemist

Sd/-
Jr. Engineer

Countersigned
Sd/-
Asstt. Engineer

Office of Executive Engineer, Construction Division, U.P. Jal Nigam
Ladapura Jalkal Complex, Jhalu Road, Bijnor
(Water Test Report)

To, Mr. Sandeep Kumar Mahesh
Assistant Engineer
Construction Division, U.P. Jal Nigam, Bijnor
Lab. Register reference: Page No. 2
Report is being sent with reference to your letter No. _____ dated _____

Tehsil:- Dhampur
Development Block: Alhepur
Date:- 20/04/2017

S.No.	Village/Town/Location	Source	Color	odor	TDS (PPM)	PH	Chemical Test in PPM								
							chloride	fluoride	total hardness	sulfate	iron	nitrate	alkalinity	bacteriological test	note
1	Village Neendadu Near Akir	Hand pump	Colorless	Odorless	240	7.5	45	0.1	260	19.2	0.2	8.86	160	Nil	Satisfactory
2	Village Salawa Near Masjid	Hand pump	Colorless	Odorless	220	7.9	20	0.4	270	28.8	0.1	8.43	180	Nil	Satisfactory
3	Village Neendadu Near Andotya School	Hand pump	Colorless	Odorless	280	7.8	50	0.2	300	9.6	0.3	11.52	200	Nil	Satisfactory
4	Sam Taparoela Near Dharampal	Hand pump	Colorless	Odorless	260	7.5	70	0.3	270	19.2	0.2	8.86	190	Nil	Satisfactory
5	Manpuri Shivpuri Near Chandrapal	Hand pump	Colorless	Odorless	300	7.9	25	0.1	280	28.8	0.4	16.83	140	Nil	Satisfactory
6	Dhampur Nagar (New	Hand pump	Colorless	Odorless	290	8	20	0.2	230	9.6	0.1	4.43	120	Nil	Satisfactory
7	Village Jaitra (Nangala Guga) Near Kake	Hand pump	Colorless	Odorless	310	8.1	45	0.3	300	19.2	0.2	2.66	160	Nil	Satisfactory
8	village Ajitpur at the ashram of tailor Mohandas	Hand pump	Colorless	Odorless	340	8.3	25	0.2	310	28.8	0.3	5.32	170	Nil	Satisfactory

Note - 1 it has been highlighted in excess of the limits mentioned in the CPHEo's standard.
2 Please refer page 2 for Standards
3. Send samples in acidic for iron analysis.

Sd/-
Chemist

Sd/-
Jr. Engineer

Countersigned
Sd/-
Asstt. Engineer

Office of Executive Engineer Construction Division, UP Jal Nigam
Ladapura Jalkal Prangan, Jhalu Road, Bijnor
(Water Test Report)

321

To, Sh K.K. Sharma,
Assistant Engineer, Construction Division,
UP Jal Nigam, Bijnor
Reference of Laboratory Register:……

Tehsil - Dhampur
Development Block- Alhepur
Date: 09-10/08/2018

With reference to your letter No.2977/Water Test/92 dated 14/08/18 number report is being sent.

SNo	Village/City/location	Source	Colour	Odour	T.D.S. (PPM)	P.H.	Chemical test in PPM							
							Chloride	Fluoride	Total hardness	Sulphate	Iron	Nitrate	Alkalinity	Remarks
1.	Near Village Kopa Nangla/Sh Mahesh S/o Sh Karan Singh	Hand Pump	Colourless	Odourless	200	7.5	70	0.5	340	48	0.5	11.08	80	Satisfactory
2.	Village Nathadoi/Dr. Bhimrao Ambedkar Jr High School	Hand Pump	Colourless	Odourless	280	7.3	20	0.2	300	24	0.2	7.97	200	Satisfactory
3.	Near Village Nandgaon/Sh Mahendra Singh Ex-Pradhan	Hand Pump	Colourless	Odourless	580	7.4	50	0.4	270	28.8	0.3	11.96	90	Satisfactory
4.	Village Ramnawala/Harijan Dharamshala	Hand Pump	Colourless	Odourless	560	7.2	40	0.3	280	19.2	0.1	13.29	150	Satisfactory
5.	Village Ramnadala/Bada Shiva Mandir	Hand Pump	Colourless	Odourless	460	7	45	0.1	420	9.6	0.1	15.06	110	Satisfactory
6.	Near Village Hadakpur/Sh Ramesh S/o Hariya	Hand Pump	Colourless	Odourless	480	8	30	0.3	340	38.4	0.2	5.32	170	Satisfactory
7.	Village Mirzapur/Sh Ravindra son Shankar Lal Sharma	Hand Pump	Colourless	Odourless	380	7.6	80	0.2	350	9.6	0.4	6.2	140	Satisfactory
8.	Village Mirzapur/Harijan Dharamshala	Hand Pump	Colourless	Odourless	300	7.2	90	0.6	290	19.2	0.1	5.76	120	Satisfactory
9.	Village Tibri/on Peepal deity	Hand Pump	Colourless	Odourless	270	7.1	35	0.1	300	24	0.2	6.66	150	Satisfactory
10.	Village Chakshahjani /in Saini Basti	Hand Pump	Colourless	Odourless	400	7.4	20	0.2	380	24	0.3	4.43	180	Satisfactory
11.	Near Village Habibwala/Sh Aakil Ex-Pradhan	Hand Pump	Colourless	Odourless	270	7.5	30	0.4	320	9.6	0.4	8.86	200	Satisfactory
12.	Near village Kodipura/Sh Brahampal Saini	Hand Pump	Colourless	Odourless	290	7.3	60	0.3	300	48	0.2	10.63	110	Satisfactory
13.	Near village Suhagpur/Sh Jabar Singh Ex-Pradhan	Hand Pump	Colourless	Odourless	320	7.2	55	0.1	360	19.2	0.1	8.42	100	Satisfactory
14.	Near village Manauti/Sh Moola Singh s/o Lallu	Hand Pump	Colourless	Odourless	280	7.6	75	0.2	320	28.8	0.3	9.75	90	Satisfactory
15.	Village Bhanoti/on the deity	Hand Pump	Colourless	Odourless	440	7.5	100	0.4	340	38.4	0.5	17.72	140	Satisfactory
16.	Near village Bhikkawala/Sh Rahul s/o Narendra Village	Hand Pump	Colourless	Odourless	360	7.4	120	0.3	280	19.2	0.4	16.83	150	Satisfactory
17.	Village Bhikkawala/Chudhiya Maharaj	Hand Pump	Colourless	Odourless	300	7	30	0.5	380	9.6	0.2	14.62	170	Satisfactory

			s	ss										
18.	Village Sherkot Nagar/Ward No. 01 Chamunda Mata ka Thala	Hand Pump	Colourless	Odourless	420	7.1	80	0.2	220	57.6	0.3	15.51	180	Satisfactory
19.	Near Village Kopa Nangla/Sh Sitaram S/o Hori	Hand Pump	Colourless	Odourless	350	7.3	70	0.6	260	57.6	0.1	7.97	110	Satisfactory
20.	Near Village Nasirdowala/Sh Vipin	Hand Pump	Colourless	Odourless	290	7.2	50	0.3	250	48	0.3	7.09	100	Satisfactory
21.	Near Village Umarpur Bangar/Sh Sanju Chauhan	Hand Pump	Colourless	Odourless	220	7.2	45	0.3	280	24	0.4	6.66	120	Satisfactory
22.	Village Karmawala/at Pind Spot	Hand Pump	Colourless	Odourless	390	7.1	30	0.2	300	19.2	0.1	8.86	140	Satisfactory
23.	Near village Gajraula/Sh Rajendra Singh	Hand Pump	Colourless	Odourless	480	7.3	90	0.2	360	38.4	0.5	5.32	160	Satisfactory
24.	Village Sarkathal Mavo/at Chamunda temple	Hand Pump	Colourless	Odourless	340	7.2	140	0.1	280	9.6	0.2	4.43	180	Satisfactory
25.	Near village Old Dhampur/Near Mr. Bhupendra Singh	Hand Pump	Colourless	Odourless	280	7.4	130	0.3	290	19.2	0.3	10.63	190	Satisfactory
26.	Village Old Dhampur/Nathan's Samadhi	Hand Pump	Colourless	Odourless	340	7.7	140	0.3	320	28.8	0.2	8.86	150	Satisfactory
27.	Near village Goyli/Sh Bunty s/o Sh Dhoom Singh	Hand Pump	Colourless	Odourless	280	7.6	70	0.3	260	9.6	0.3	11.52	100	Satisfactory
28.	Village Ramthera/Sri Ram Saraswati Vidya Mandir	Hand Pump	Colourless	Odourless	380	7.5	80	0.1	280	19.2	0.1	13.29	80	Satisfactory
29.	Village Ramthera/at Shiva Mandir	Hand Pump	Colourless	Odourless	540	7.3	20	0.2	340	24	0.2	15.95	120	Satisfactory
31.	Village Jaitra/Sh Ganga Ram/Munna Cement Wale	Hand Pump	Colourless	Odourless	400	7.2	50	0.4	250	38.4	0.1	21.26	200	Satisfactory
32.	Near village Palki Aman/Sh Ashok	Hand Pump	Colourless	Odourless	330	7.1	70	0.3	240	48	0.3	8.86	120	Satisfactory
33.	Village Kopa/Gorakhnath Temple	Hand Pump	Colourless	Odourless	330	7.3	90	0.1	200	9.6	0.4	9.3	150	Satisfactory
34.	Village Bhawanwala/at Chamunda Mandir	Hand Pump	Colourless	Odourless	250	7.5	100	0.1	300	38.4	0.5	5.32	170	Satisfactory

322

Note - 1 it has been highlighted in excess of the limits mentioned in the CPHEo's standard.
2 Please refer page 2 for Standards
3. Send samples in acidic for iron analysis.

Sd/-
Jr. Engineer

Countersigned
Sd/-
Asstt. Engineer

Office of Executive Engineer, Construction Division, U.P. Jal Nigam
Ladapura Jalkal Complex, Jhalu Road, Bijnor
(Water Test Report)

To, Mr. K.K. Sharma
Assistant Engineer
Construction Division, U.P. Jal Nigam, Bijnor
Lab. Register reference:.....

Tehsil:- Dhampur
Development Block: Alhepur
Date:- 23,24,25/08/2018

Report is being sent with reference to your letter No. 3237/Water Test/101 dated 05/09/2018

S.No.	Village/Town/Location	Source	Color	odor	TDS (PPM)	PH	Chemical Test in PPM							
							chloride	fluoride	total hardness	sulfate	iron	nitrate	alkalinity	note
01.	Village Suhagpur / Near Madrasa	Hand pump	Colorless	Odorless	190	7.5	60.00	0.2	220	19.2	0.3	9.30	150	Satisfactory
02.	Village Suhagpur / Near Vinod Kumar	Hand pump	Colorless	Odorless	280	7.2	30.00	0.1	260	9.6	0.2	5.32	140	Satisfactory
03.	Village Suhagpur/Near Shri Gopal Puria	Hand pump	Colorless	Odorless	200	7.1	20.00	0.3	300	28.8	0.4	16.83	110	Satisfactory
04.	Village Suhagpur/RSM Degree College	Hand pump	Colorless	Odorless	340	7.3	40.00	0.4	200	19.2	0.1	7.09	130	Satisfactory
05.	Village Suhagpur/Near Shri Latif	Hand pump	Colorless	Odorless	300	7.4	70.00	0.5	320	24.2	0.2	14.18	160	Satisfactory
06.	Village Suhagpur / Near Sri Tegh Bahadur	Hand pump	Colorless	Odorless	180	7.0	25.00	0.2	380	38.4	0.1	5.76	190	Satisfactory
07.	Village Suhagpur/RSM Inter College	Hand pump	Colorless	Odorless	250	7.0	60.00	0.1	280	9.6	0.3	8.86	130	Satisfactory
08.	Village Suhagpur / Near Badi Masjid	Hand pump	Colorless	Odorless	260	7.3	45.00	0.3	250	19.2	0.2	6.66	230	Satisfactory
09.	Village Suhagpur / Near Shehnai Mandap	Hand pump	Colorless	Odorless	380	7.2	50.00	0.2	260	48.0	0.4	4.43	170	Satisfactory
10.	Village Salava / Near Mr. Madan's house	Hand pump	Colorless	Odorless	420	7.4	80.00	0.1	350	57.6	0.5	2.66	130	Satisfactory
11.	In village Salwa/primary school	Hand pump	Colorless	Odorless	150	7.1	90.00	0.4	320	28.8	0.2	11.08	140	Satisfactory
12.	Village Salwa / Near Shri Gangaram	Hand pump	Colorless	Odorless	360	7.7	110.00	0.5	310	19.2	0.1	10.63	90	Satisfactory
13.	Village Salwa / Near Shri Ram	Hand	Colorless	Odorless	340	7.5	120.00	0.6	380	9.6	0.3	7.53	110	Satisfactory

	Singh	pump												
14.	Village Jagupura/Near Shri Dharampal	Hand pump	Colorless	Odorless	240	7.6	75.00	0.3	200	38.4	0.2	14.62	140	Satisfactory
15.	Village Jagupura / At Mor	Hand pump	Colorless	Odorless	160	7.2	50.00	0.2	190	28.84	0.4	17.72	180	Satisfactory
16.	Village Jagupura/ In School	Hand pump	Colorless	Odorless	350	7.0	20.00	0.1	260	19.2	0.5	15.95	200	Satisfactory
17.	Village Jagupura / near Shri Dharampal,S/o Omprakash	Hand pump	Colorless	Odorless	320	7.1	25.00	0.3	270	9.6	0.2	9.30	150	Satisfactory
18.	Village Alhaipur Nagar / Near Shree Chetram Saini	Hand pump	Colorless	Odorless	400	7.3	35.00	0.1	340	9.6	0.1	4.43	170	Satisfactory
19.	Village Alhaipur Nagar/Near Mr. Manoj Kumar	Hand pump	Colorless	Odorless	420	7.2	30.00	0.2	250	24.0	0.3	11.52	210	Satisfactory
20.	Village Alhaipur Nagar/Rani Phool Kumari School	Hand pump	Colorless	Odorless	380	7.4	40.00	0.3	350	24.0	0.3	8.86	130	Satisfactory
21.	Village Alhaipur Nagar / Near Shri Nutan	Hand pump	Colorless	Odorless	360	7.3	70.00	0.4	380	48.0	0.4	2.66	160	Satisfactory
54.	Village Aladdinpur / Near Shri Yamin	Hand pump	Colorless	Odorless	360	7.6	75.00	0.3	200	38.4	0.2	14.62	140	Satisfactory
55.	Village Jamalpur Alam / Valmiki Basti	Hand pump	Colorless	Odorless	240	7.6	75.00	0.3	200	38.4	0.2	14.62	140	Satisfactory
56.	Village Sabdulla Khanpur/ At Devta	Hand pump	Colorless	Odorless	240	7.6	75.00	0.3	200	38.4	0.2	14.62	140	Satisfactory
57.	Village Nathadoi/Primary School	Hand pump	Colorless	Odorless	240	7.6	75.00	0.3	200	38.4	0.2	14.62	140	Satisfactory
58.	Village Bhootpuri/ Near Shri Nanhe B.D.C.	Hand pump	Colorless	Odorless	240	7.6	75.00	0.3	200	38.4	0.2	14.62	140	Satisfactory
59.	Village Chakshah Jani / Near Shri Ramprasad	Hand pump	Colorless	Odorless	240	7.6	75.00	0.3	200	38.4	0.2	14.62	140	Satisfactory
60.	Village Chakshah Jani/ At Chamunda Temple	Hand pump	Colorless	Odorless	240	7.6	75.00	0.3	200	38.4	0.2	14.62	140	Satisfactory

Note - 1 it has been highlighted in excess of the limits mentioned in the CPHEo's standard.

2 Please refer page 2 for Standards

3. Send samples in acidic for iron analysis.

Sd/-

Jr. Engineer

Countersigned

Sd/-

Asstt. Engineer

Office of Executive Engineer, Construction Division, U.P. Jal Nigam
Ladapura Jalkal Complex, Jhalu Road, Bijnor
(Water Test Report)

To, Mr. K.K. Sharma
Assistant Engineer
Construction Division, U.P. Jal Nigam, Bijnor

Tehsil:- Dhampur

Development Block: Alhepur

Lab. Register reference:…….

Date:- 28/08/2019

Report is being sent with reference to your letter No. 166/Water Test/55 dated 01/07/19

S.No.	Village/Town/Location	Source	Color	odor	TDS (PPM)	PH	Chemical Test in PPM							
							chloride	fluoride	total hardness	sulfate	iron	nitrate	alkalinity	note
1.	Village Nindadu Khas / Shri Kripal, Putra Shri Parmula	Hand pump	Colorless	Odorless	284	7.1	80.00	0.2	220	9.6	0.2	9.30	90	Satisfactory
2.	At the tomb of village Ajitpur Dasi / Shri Rajpal	Hand pump	Colorless	Odorless	274	7.3	90.00	0.1	240	19.2	0.1	21.26	180	Satisfactory
3.	Near Village Sarkathal / Smt. Kusumlata	Hand pump	Colorless	Odorless	282	7.2	20.00	0.3	280	38.4	0.2	17.29	110	Satisfactory
4.	Village Umarpur Khadar / Shri Naresh, son Shri Amir Singh	Hand pump	Colorless	Odorless	302	7.4	70.00	0.2	300	48.0	0.1	15.06	170	Satisfactory
5.	Village Devnagar / Shri Deepak Bishnoi	Hand pump	Colorless	Odorless	300	7.1	35.00	0.1	340	24.0	0.3	14.18	120	Satisfactory
6.	On the plot of village Buapur Nathu / Mr. Rajkumar	Hand pump	Colorless	Odorless	256	7.2	60.00	0.4	280	28.0	0.2	8.86	140	Satisfactory
7.	Village Suhagpur / Shri Ghasiram, son Shri Buddhu Singh	Hand pump	Colorless	Odorless	258	7.0	40.00	0.2	320	19.2	0.4	5.32	150	Satisfactory
8.	Village Chaksah Jani / Near Shri Fakira	Hand pump	Colorless	Odorless	275	7.3	45.00	0.1	260	19.2	0.5	6.66	130	Satisfactory

9.	Village Palki Gamal / Mr. Ramesh Balmiki	Hand pump	Colorless	Odorless	308	7.2	50.00	0.3	250	9.6	0.1	7.09	100	Satisfactory
10.	Village Naurangabad / Shri Rajendra, son Shri Jahar Singh	Hand pump	Colorless	Odorless	420	7.1	70.00	0.1	360	24.0	0.2	15.95	190	Satisfactory
11.	Village Mirzapur / Junior High School	Hand pump	Colorless	Odorless	342	7.4	75.00	0.4	380	38.4	0.1	4.43	130	Satisfactory
12.	Village Sarakra / Mr. Little's Shop	Hand pump	Colorless	Odorless	376	7.3	80.00	0.3	230	19.2	0.3	11.52	120	Satisfactory
13.	Village Kaliyapur / Shri Ganesh, son Shri Rajendra	Hand pump	Colorless	Odorless	267	7.5	100.00	0.5	240	48.0	0.1	17.28	100	Satisfactory
14.	Village Jagupura / Harijan Dharamshala	Hand pump	Colorless	Odorless	250	7.2	20.00	0.1	270	9.6	0.4	10.63	90	Satisfactory
15.	Village Sadotar / Shri Bittu Chauhan	Hand pump	Colorless	Odorless	242	7.1	25.00	0.2	300	38.4	0.2	15.06	80	Satisfactory
16.	Village Nurpur / Chamunda Mandir	Hand pump	Colorless	Odorless	296	7.0	40.00	0.1	320	28.8	0.1	11.08	120	Satisfactory
17.	Village Tivdi / Saini Dharamshala	Hand pump	Colorless	Odorless	292	7.0	30.00	0.3	310	28.8	0.3	8.86	110	Satisfactory

Note - 1 it has been highlighted in excess of the limits mentioned in the CPHEo's standard.
2 Send samples in acidic for iron analysis.

Sd/-
Jr. Engineer

Countersigned

Asstt. Engineer

Office of Executive Engineer, Construction Division, U.P. Jal Nigam
Ladapura Jalkal Complex, Jhalu Road, Bijnor
(Water Test Report)

To, Mr. K.K. Sharma

Assistant Engineer

Construction Division, U.P. Jal Nigam, Bijnor

Lab. Register reference:…….

Tehsil:- Dhampur

Development Block: Alhepur

Date:- 21/08/2020

Report is being sent with reference to your letter No. 1556/Water Test/42 dated 27/08/2020

S.No.	Village/Town/Location	Source	TDS (PPM)	PH	Chemical Test in PPM							
					chloride	fluoride	total hardness	sulfate	iron	nitrate	alkalinity	note
1	Village Majupura/Devata sthal	Hand pump	270	7.6	70	0.2	230	9.6	0.3	5.32	220	Satisfactory
2	Village Nasirpur Banvari/Near Tejpal	Hand pump	240	7.5	80	0.3	260	12	0.4	6.66	190	Satisfactory
3	Village Navada Kesho/Near Harish	Hand pump	420	7.4	100	0.4	240	24	0.4	8.86	90	Satisfactory
4	Village Ajit Dasi/near Naresh	Hand pump	370	7.2	30	0.1	280	48	0.5	10.63	100	Satisfactory
5	Village Haijari/Near Mayank	Hand pump	330	7.3	40	0.1	270	28.8	0.6	6.66	130	Satisfactory

Note - 1 it has been highlighted in excess of the limits mentioned in the CPHEo's standard.
2 Send samples in acidic for iron analysis.

Sd/-
Jr. Engineer

Countersigned
Sd/-
Asstt. Engineer

Office of Executive Engineer, Construction Division, U.P. Jal Nigam
Ladapura Jalkal Complex, Jhalu Road, Bijnor
(Water Test Report)

To, Mr. K.K. Sharma
Assistant Engineer
Construction Division, U.P. Jal Nigam, Bijnor

Tehsil:- Dhampur

Development Block: Alhepur

Lab. Register reference:.....

Date:- 12.02.2020

Report is being sent with reference to your letter No. 409/Water Test/07 dated 13.02.2020

S.No.	Village/Town/Location	Source	TDS (PPM)	PH	Chemical Test in PPM							
					chloride	fluoride	total hardness	sulfate	iron	nitrate	alkalinity	note
01	Village Hafizabad / Near Mr. Vijender's house	Hand pump	360	7.2	80	0.1	250	19.2	0.3	9.30	120	Satisfactory
02	Village Hafizabad / Near Bhavani Mata Mandir	Hand pump	420	7.3	90	0.2	420	48	0.2	14.18	100	Satisfactory
03	Village Nurpur Chhibri / Near Mr. Amar Singh's house	Hand pump	320	7.1	60	0.4	360	9.6	0.4	10.63	130	Satisfactory

Note - 1 it has been highlighted in excess of the limits mentioned in the CPHEo's standard.
2 Send samples in acidic for iron analysis.

Sd/-
Jr. Engineer

Countersigned

Asstt. Engineer

Annexure-15

From,

Chief Executive Officer
Fisheries Development Agency, Bijnor.

To,

The Regional Officer, Uttar Pradesh Pollution Control Board,
Near Saint Merry School, Bijnor.

Letter No. 1324/NGT/2021-22 Dated:- 22-12-2021

Subject: Hon'ble NGT order dated 1st September 2021 in the matter of Sh. Aadil Ansari v/s M/S Dhampur sugar Mills & ors [I.A. No. 376/2020] reg.

Sir,

In continuation to your office above subjected reference No. 611/PA/General-2021 dated 18.12.2021, it is to inform you that at present no problem of pollution exists in the ponds of any revenue villages from the nearby concerned villages of Dhampur Sugar Mill. The information is kindly submitted at your service.

Yours sincerely,
Sd/-
illegible
Chief Executive Officer
Fisheries Development Agency,
Bijnor.

Annexure 4

ITEM NO.39 COURT NO.14 SECTION XVII

S U P R E M E C O U R T O F I N D I A
RECORD OF PROCEEDINGS

Civil Appeal No(s). 5975/2021

M/S DHAMPUR BIO ORGANICS LIMITED & ORS. Appellant(s)

VERSUS

ADIL ANSARI & ORS. Respondent(s)

IA No. 123838/2021 - EXEMPTION FROM FILING C/C OF THE IMPUGNED JUDGMENT
IA No. 123839/2021 - EXEMPTION FROM FILING O.T.
IA No. 123836/2021 - STAY APPLICATION

Date : 06-09-2024 This matter was called on for hearing today.

CORAM : HON'BLE MR. JUSTICE PAMIDIGHANTAM SRI NARASIMHA
HON'BLE MR. JUSTICE SANDEEP MEHTA

For Appellant(s) Ms. Amita Gupta Katragadda, Adv.
Mr. Vikash Kumar Jha, Adv.
Ms. Namrata Sadhnani, Adv.
Ms. Varalika Dev, Adv.
Ms. Ena Kapur, Adv.
M/S. Cyril Amarchand Mangaldas Aor, AOR

For Respondent(s) Ms. Preeti Singh, AOR
Mr. Sunklan Porwal, Adv.
Ms. Shefali Menezes, Adv.

Mr. Saurabh Mishra, AOR
Mr. Shrimay Mishra, Adv.
Mr. Abhinav Pandey, Adv.

Mr. Pradeep Misra, AOR

Ms. Aishwarya Bhati, A.S.G.
Ms. Ruchi Kohli, Adv.
Ms. Swarupama Chaturvedi, Adv.
Ms. Chitrangda Rastravara, Adv.
Ms. Shraddha Deshmukh, Adv.
Dr. N. Visakamurthy, AOR

UPON hearing the counsel the Court made the following

O R D E R

1. A joint report by the Central Pollution Control Board (CPCB) and the State Pollution Control Board shall be filed indicating the compliances as per the directions of the National Green Tribunal and also after taking into account the subsequent Committee reports. The report shall also indicate about the compliances of the conditions specified in the environmental clearances and further steps which need to be taken by the appellant(s). The report shall be filed within a period of six weeks from today.

2. List thereafter.

(KAPIL TANDON)
COURT MASTER (SH)

(NIDHI WASON)
COURT MASTER (NSH)

Annexure 5

IN THE SUPREME COURT OF INDIA

CIVIL APPELLATE JURISDICTION

CIVIL APPEAL No. 5975 of 2021

IN THE MATTER OF: -

M/S DHAMPUR BIO ORGANICS
LIMITED & ORS.

…PETITIONER

VERSUS

ADIL ANSARI & ORS.

…RESPONDENT(S)

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2.	**ANNEXURE R-1** COPY OF THE HON'BLE SUPREME COURT'S ORDER DATED 06.09.2024	11-12
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THROUGH:

SAURABH MISHRA

ADVOCATE FOR THE RESPONDENT No. 5
Chamber: 628, Block D, Additional Building Complex
Supreme Court of India, New Delhi – 110001
Office: D-277, First Floor, Defence Colony, New Delhi – 110024
Mob: +91-9810160176
Email: reachsaurabh@hotmail.com
office@mishra.law

Place: New Delhi
Date: 21.12.2024

IN THE SUPREME COURT OF INDIA

CIVIL APPELLATE JURISDICTION

CIVIL APPEAL No. 5975 of 2021

IN THE MATTER OF: -

M/S DHAMPUR BIO ORGANICS LIMITED & ORS.

...APPELLANT(S)

VERSUS

ADIL ANSARI & ORS.

...RESPONDENT(S)

AFFIDAVIT IN COMPLIANCE OF THIS HON'BLE COURT'S ORDER DATED 06.09.2024 IN THE AFORESAID MATTER BY RESPONDENT NO. 5 i.e. CENTRAL POLLUTION CONTROL BOARD.

I, Ajit Kumar Vidyarthi S/o Late Vikrama Singh, aged about 53 years currently working as Scientist "F" in Central Pollution Control Board, Parivesh Bhawan, East Arjun Nagar, Delhi – 110032, the Respondent No. 5 in the above matter (hereinafter referred to as "CPCB") do hereby solemnly affirm and declare as under:

1. That I, in capacity of Scientist "F" in CPCB, have made myself acquainted with the facts and circumstances of the instant case due to the official capacity as mentioned above and based on available records, I am well versed with the facts and circumstances of the matter and as such competent & authorized to affirm this affidavit on behalf

NOTARY PUBLIC
R.L. Chaudhary
N.C.T. of Delhi
Regd. No. 1513
GOVT. OF INDIA

of Respondent No. 5.

2. That this Hon'ble Court while hearing the aforesaid matter on 06.09.2024, has directed as follows:

"1. A joint report by the Central Pollution Control Board (CPCB) and the State Pollution Control Board shall be filed indicating the compliances as per the directions of the National Green Tribunal and also after taking into account the subsequent Committee reports. The report shall also indicate about the compliances of the conditions specified in the environmental clearances and further steps which need to be taken by the appellant(s). The report shall be filed within a period of six weeks from today.
2. List thereafter."

The copy of Hon'ble Supreme Court order dated 06.09.2024 is annexed herewith and marked as **Annexure-R1 (page no. 11 to 12)**.

3. That, the Joint Committee of CPCB & Uttar Pradesh Pollution Control Board (hereinafter referred to as UPPCB) carried out inspection of the four industrial units (referred above) during October 2024. Also, it is pertinent to mention that earlier all units were part of M/s Dhampur Sugars Ltd. Now, after demerger of companies, units in Asmoli and Meerganj belong to the company namely "M/s Dhampur Bio-organics Ltd." and units in Dhampur belong to the company namely "M/s Dhampur Sugars Ltd".

NOTARY PUBLIC R.L. Chaudhary N.C.T. of Delhi Regd. No. 1513 GOVT. OF INDIA

4. That during inspection, the team collected the samples from aeration tanks of effluent treatment plants (ETPs), Sewage Treatment Plant

(STP), bore wells and recipient drain and checked logbooks for ETPs, STPs, bore wells, ash & sludge generation, energy consumption. The team also verified the compliance status on the recommendation of past reports namely a) detailed report Jan 2023, b) joint inspection report dated 26-03-2021, c) Hon'ble NGT order dated 01-09-2021 and d) specific conditions in environmental clearance.

5. That during visit, all units were found non-operational. Three sugar mills were non- operational due to closing of crushing season and the fourth unit, a distillery, was non-Operational due to shortage of raw material (molasses / grain). However, it is proposed that UPPCB shall carry out random inspections of the units in operational condition. Copy of Joint Committee Report of CPCB and UPPCB is annexed herewith and marked as **Annexure- R2 (page no. 13 to 79) .**

6. The detailed site inspection reports of the four industrial units are annexed as Annexure-A to Annexure-D of the detailed final report (page no. 23 to 79). The compliance of general conditions of environmental clearance is mostly covered within the information provided in the report and the compliance status in respect of specific/salient conditions of environmental clearance is provided in a separate section in individual reports. Report of each industrial unit, as at Annexure -A to Annexure-D of the Joint Committee Report of CPCB and UPPCB is divided into six parts:

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Part A: General information.

Part B: Verification of compliance status on the findings/recommendation of the detailed report Jan 2023.

Part C: Verification of compliance status on the findings/recommendation of joint inspection report dated 26-03-2021.

Part D: Verification of compliance of the directions of Hon'ble NGT judgement dated 01.09.2021.

Part E: Verification of specific/salient conditions of Environmental Clearance Part F: Conclusion & Recommendations.

7. That Unit wise conclusions and recommendations are reproduced below:

7.1 M/s Dhampur Bio Organics Ltd., Unit-Asmoli, District Sambhal (Sugar Unit)

Conclusion:

1. Unit was non-operational during joint site inspection by CPCB and UPPCB on 10.10.2024 due to non-crushing season. During survey of the surroundings of the unit and Sot river, no coloured water was visible at the time of visit.
2. The ground water sample analysis result does not indicate impact due to the industry.
3. The unit has complied with the recommendations of Joint Inspection report dated 13th January 2021. Details of the same are mentioned in Part C of the report.
4. The details of the verification of the directions of Hon'ble NGT passed vide judgement dated 01.09.2021 are mentioned in Part D of the report. Unit has complied all the points except the directions regarding interlocking of Pollution Control Devices with production processes.

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5. The detailed compliance status of Environmental Clearance (EC) conditions is mentioned at Part E of the report. The unit has not compiled with the following conditions:
   i. No rainwater harvesting system was observed in the plant.
   ii. Not installed CAAQMS.

Inspections by third party institutes authorised by CPCB in the past:

A third party technical institutes authorised by CPCB carried out inspection of the unit in operational condition on 20-02-2022 and 01-03-2023 and unit was found complying standards during both inspections.

Recommendations:

1. The unit shall maintain the ash disposal record with respect to disposal and distribution.
2. Unit shall implement a system for interlocking of the pollution control plants / devices and the production process, as directed by Hon'ble NGT-PB.
3. UPPCB shall carry out random inspection of the unit in operational condition.
4. Unit shall comply with following EC conditions:
   i. Install CAAQMS stations as per EC condition.
   ii. Make provision for rain water harvesting as per EC condition.

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7.2 M/s Dhampur Bio Organics Ltd., Unit-Meerganj, District Bareilly (Sugar Unit)

Conclusion:

1. Unit was non-operational during joint site inspection by CPCB and UPPCB on 18.10.2024 due to non-crushing season. During survey of the surroundings of the unit and Sot river, no coloured water was visible at the time of visit.
2. The ground water sample analysis result does not indicate impact due to the industry.
3. The unit has complied with the recommendations of Joint Inspection report dated 13th January 2021. Details of the same are mentioned in Part C of the report.
4. The details of the verification of the directions of Hon'ble NGT passed vide judgement dated 01.09.2021 are mentioned in Part D of the report. Unit has complied all the points except the directions regarding interlocking of Pollution Control Devices with production processes.
5. The detailed compliance status of Environmental Clearance (EC) conditions is mentioned at Part E. The unit has not compiled with the following conditions:
   i. No rainwater harvesting system was observed in the plant.
   ii. Not installed CAAQMS.

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Inspections by third party institutes authorised by CPCB in the past:

A third party technical institutes authorised by CPCB carried out annual inspection of the unit in operational condition on 17-01-

2022 and 15-02-2023 and unit was found complying standards during both inspections.

Recommendations:

1. The unit shall maintain the ash disposal record with respect to disposal and distribution.
2. Unit shall implement a system for interlocking of the pollution control plants

/ devices and the production process, as directed by Hon'ble NGT-PB.

3. UPPCB shall carry out random inspection of the unit in operational condition.
4. Unit shall comply with following EC conditions:
   i. Install CAAQMS stations as per EC condition.
   ii. Make provision for rain water harvesting as per EC condition.

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7.3 M/s Dhampur Sugar Mills Limited, Village Alhaipur, Tehsil Dhampur, District Bijnor (Sugar Unit)

Conclusion

1. Unit was non-operational during joint site inspection by CPCB and UPPCB on 16.10.2024 due to non-crushing season.
2. Analysis results of samples collected from Ikra drain and bore well indicate no industrial impact.
3. The unit has complied with recommendations of Joint Inspection report dated 02-03 Feb 2021 (detailed findings in Part C), except following:

a. Unit has not reclaimed/filled up 4000 m3 capacity lagoon near its agricultural fields completely. It was partially filled with mud and rainwater and HDPE lining still exists.
b. Unit has not implemented the suggestion to enhance capacity of water tank for filter backwashing The unit explained that the existing capacity has been sufficient which can be verified in periodic inspections of the unit in operational condition by UPPCB.

4. The details of the verification of the directions of Hon'ble NGT passed vide judgement dated 01.09.2021 are mentioned in Part D of the report. Unit has complied all the points except the directions regarding interlocking of Pollution Control Devices with production processes.

Inspections by third party institutes authorised by CPCB in the past

A third party technical institutes authorised by CPCB carried out annual inspection on 12-01-2022 and 14-02-2023. Unit was found not complying standards during inspection on 12-01-2022 and UPPCB issued show-cause notice to the unit on 22-02-2022 which was later withdrawn as unit was found complying standards in subsequent inspection by UPCB. Unit was found complying standards during inspection on 14-02-2023 by third party technical institute authorised by CPCB.

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Recommendations:

1. The unit shall either cover the 4000 m3 capacity earthen lagoon, which was used for storing treated effluent in the past, with brick-lining or reclaim/fill up it completely.
2. Unit shall implement a system for interlocking of the pollution control plants / devices and the production process, as directed by Hon'ble NGT- PB.
3. UPPCB shall carry out random inspection of the unit in operational condition.

7.4 M/s Dhampur Sugar mills limited Chemical Division., (Distillery Division) Dhampur District Bijnor on 16.10.2024

Conclusion:

1. Unit was non-operational during joint site inspection by CPCB and UPPCB on 16.10.2024 due to shortage of raw material (molasses & grain).
2. The unit has complied with the recommendations of Joint Inspection report dated 02nd Feb 2021. Details of the same are mentioned in Part B of the report.
3. The detailed compliance status of Environmental Clearance (EC) conditions is mentioned at Part C. The unit has not compiled with the following conditions:
   a. DG is not provided with acoustic enclosure.

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Inspections by third party institutes authorised by CPCB in the past:

A third party technical institutes authorised by CPCB carried out annual inspection of the unit in operational condition on 15.01.2022 and 18.03.2023 and the unit was found complying no effluent discharge condition during both inspections.

Recommendations:

1. Unit shall provide acoustic enclosure at the DG set.
2. UPPCB shall carry out random inspection of the unit in operational condition.

8. That in addition to the aforesaid submissions, it is humbly submitted that this Answering Respondent shall abide by any/all orders or directions passed by this Hon'ble Court.

9. That no new facts and no documents which were not pleaded before the courts below have been pleaded in this affidavit.

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Ajit Kumar Vidyarthi
DEPONENT
ए. के. विद्यार्थी / A. K. Vidyarthi
वैज्ञानिक 'एफ' / Scientist 'F'
केंद्रीय प्रदूषण नियंत्रण बोर्ड
Central Pollution Control Board
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, भारत सरकार
M/o Env. Forest & Climate Change, Govt. of India
परिवेश भवन, पूर्वी अर्जुन नगर, दिल्ली–110032
Parivesh Bhawan, East Arjun Nagar, Delhi-110032

VERIFICATION

I, the deponent hereinabove, do hereby verify that the contents of this Compliance Affidavit which is based on official record and information available in the office are true and correct to the best of my knowledge and belief. Nothing material has been concealed therefrom.

Signed and verified at New Delhi on this 20 DEC 2024 Day of December, 2024.

ATTESTED
NOTARY PUBLIC
GOVT. OF INDIA
20 DEC 2024

Ajit Kumar Vidyarthi
DEPONENT
ए. के. विद्यार्थी / A. K. Vidyarthi
वैज्ञानिक 'एफ' / Scientist 'F'
केंद्रीय प्रदूषण नियंत्रण बोर्ड
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Parivesh Bhawan, East Arjun Nagar, Delhi-110032

ITEM NO.39 COURT NO.14 SECTION XVII

S U P R E M E C O U R T O F I N D I A
RECORD OF PROCEEDINGS

Civil Appeal No(s). 5975/2021

M/S DHAMPUR BIO ORGANICS LIMITED & ORS. Appellant(s)

VERSUS

ADIL ANSARI & ORS. Respondent(s)

IA No. 123838/2021 - EXEMPTION FROM FILING C/C OF THE IMPUGNED JUDGMENT
IA No. 123839/2021 - EXEMPTION FROM FILING O.T.
IA No. 123836/2021 - STAY APPLICATION

Date : 06-09-2024 This matter was called on for hearing today.

CORAM : HON'BLE MR. JUSTICE PAMIDIGHANTAM SRI NARASIMHA
HON'BLE MR. JUSTICE SANDEEP MEHTA

For Appellant(s) Ms. Amita Gupta Katragadda, Adv.
Mr. Vikash Kumar Jha, Adv.
Ms. Namrata Sadhnani, Adv.
Ms. Varalika Dev, Adv.
Ms. Ena Kapur, Adv.
M/S. Cyril Amarchand Mangaldas Aor, AOR

For Respondent(s) Ms. Preeti Singh, AOR
Mr. Sunklan Porwal, Adv.
Ms. Shefali Menezes, Adv.

Mr. Saurabh Mishra, AOR
Mr. Shrimay Mishra, Adv.
Mr. Abhinav Pandey, Adv.

Mr. Pradeep Misra, AOR

Ms. Aishwarya Bhati, A.S.G.
Ms. Ruchi Kohli, Adv.
Ms. Swarupama Chaturvedi, Adv.
Ms. Chitrangda Rastravara, Adv.
Ms. Shraddha Deshmukh, Adv.
Dr. N. Visakamurthy, AOR

UPON hearing the counsel the Court made the following
O R D E R

1. A joint report by the Central Pollution Control Board (CPCB) and the State Pollution Control Board shall be filed indicating the compliances as per the directions of the National Green Tribunal and also after taking into account the subsequent Committee reports. The report shall also indicate about the compliances of the conditions specified in the environmental clearances and further steps which need to be taken by the appellant(s). The report shall be filed within a period of six weeks from today.

2. List thereafter.

(KAPIL TANDON)
COURT MASTER (SH)

(NIDHI WASON)
COURT MASTER (NSH)

INSPECTION REPORT

OF

1. M/S DHAMPUR BIO-ORGANICS LTD., ASMOLI (SUGAR UNIT)

2. M/S DHAMPUR BIO-ORGANICS LTD., MEERGANJ (SUGAR UNIT)

3. M/S DHAMPUR SUGAR MILLS LTD., DHAMPUR (SUGAR UNIT)

4. M/S DHAMPUR SUGAR MILLS LTD., DHAMPUR (DISTILLERY UNIT)

IN COMPLIANCE TO

HON'BLE SUPREME COURT ORDER DATED 06.09.2024

IN THE MATTER OF

[CA No. 5975/2021]

M/S DHAMPUR BIO-ORGANICS LTD. & Ors.

VS

ADIL ANSARI & Ors.

-PREPARED BY-

THE JOINT COMMITTEE OF CPCB AND UPPCB

(DECEMBER 2024)

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2.2 Conclusion and recommendations of M/s Dhampur Bio Organics Ltd., Unit-Meerganj, District Bareilly (Sugar Unit)

2.3 Conclusion and recommendations of M/s Dhampur Sugar Mills Limited, Village Alhaipur, Tehsil Dhampur, District Bijnor (Sugar Unit)

2.4 Conclusion and recommendations of M/s Dhampur Sugar Mills Limited, Village Alhaipur, Tehsil Dhampur, District Bijnor (Distillery Unit)

3. **Annexure-A...**.....pg. no. **11 to 29**

Detailed site visit report of M/s Dhampur Bio Organics Ltd., Unit-Asmoli, District Sambhal (Sugar Unit) on 10.10.2024

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6. **Annexure-D...**.....pg. no. **58 to 67**

Detailed site visit report of M/s Dhampur Sugar Mills Limited, Village Alhaipur, Tehsil Dhampur, District Bijnor (Distillery Unit)

ABBREVIATIONS

AAQ	Ambient Air Quality
ACF	Activated Carbon Filter
APCD	Air Pollution Control Device
BOD	Biological Oxygen Demand
CAAQMS	Continuous Ambient Air Quality Monitoring Station
CCA	Consolidated Consent& Authorization
CGWA	Central Ground Water Authority
CIP	Cleaning in Process
COD	Chemical Oxygen Demand
CPCB	Central Pollution Control Board
CPU	Condensate Polishing Unit
DG	Diesel Generator
DO	Dissolved Oxygen
EC	Environment Clearance
EIA	Environment Impact Assessment
EMC	Environmental Management Cell
ENA	Extra Neutral Alcohol
ESP	Electrostatic Precipitator
ETP	Effluent Treatment Plant
KL	Kilo Litre
KLD	Kilo Litre Per Day
KVA	Kilo Volte Ampere
KWH	Kilo Watt Hour
MBBR	Moving Bed Biofilm Reactor
MCF	Micron Cartridge Filter
MEE	Multi Effect Evaporator
Mg/L	Milligram Per Litre
MGF	Multi Grade Filter
MLSS	Mixed Liquor Suspended Solids
MLVSS	Mixed Liquor Volatile Suspended Solids
MoEF&CC	Ministry of Environment, Forest & Climate Change
MPR	Multi Pressure Distillation
MT	Metric Ton
NGT-PB	National Green Tribunal- Principal Bench
NOC	No Objection Certificate
NSI	National Sugar Institute
OCEMS	Online effluent & emission monitoring systems
PM	Particulate Matter
PTZ	Pan, Tilt & Zoom
RO	Reverse Osmosis
STP	Sewage Treatment Plant
TCD	Ton Cane Crushing Per Day
TPH	Ton per Hour
TSDF	Treatment, Storage, and Disposal Facility
UF	Ultra filtration
UGR	Underground Reservoir
UPGWD	Uttar Pradesh Ground Water Department
UPPCB	Uttar Pradesh Pollution Control Board
UV	Ultraviolet
ZLD	Zero Liquid Discharge

Joint report of Central Pollution Control Board (CPCB) and Uttar Pradesh Pollution Control Board (UPPCB) in compliance to Hon'ble Supreme Court Order dated 06 September 2024 in the matter C.A. No. 5975/2021 of Dhampur Bio-organics & Ors Vs Adil Ansari & Ors.

1. Background

1.1 Hon'ble NGT order dated 09-11-2020 in OA no 539/2019

Hon'ble National Green Tribunal, Principal Bench (NGT-PB) issued an order on 09-11-2020 in Original Application (**O.A.**) No 539 of 2019 - Adil Ansari Vs M/s Dhampur Sugar Mills Ltd. and Ors, directed Central Pollution Control Board (CPCB) and U.P. State Pollution Control Board (**UPPCB**) to undertake inspection of four industrial units namely- (i) M/s Dhampur Bio-Organics Mills Ltd., Asmoli (Sugar Unit) Dist- Sambhal (U.P), (ii) M/s Dhampur Bio-Organics Mills Ltd., Meerganj, Dist Bareilly (U.P), (iii) M/s Dhampur Sugar Mills Ltd., (Sugar Unit), Dhampur, Dist- Bijnor (U.P) and (iv) M/s Dhampur Sugar Mills Ltd., (Distillery Unit), Dhampur, Dist- Bijnor (U.P). (hereafter referred as "the four units").

Hon'ble NGT order dated 09-11-2020 is annexed at **Annexure-1A.**

In compliance to the order, the joint team of CPCB and UPPCB carried out inspections of the four industrial units referred above during January-Feb 2021 and report was submitted on **26-03-2021** to Hon'ble NGT-PB. Hereinafter referred to as joint inspection report dated 26-03-2021.

1.2 Hon'ble NGT order dated 01-09-2021 in OA no 539/2019

Subsequently, Hon'ble NGT-PB passed judgement on 01-09-2021 in the above matter, directing all the four units referred above to pay environmental compensation (EC) of Rs 5 crores each and directing CPCB, UPPCB and District Administration to constitute a committee to carry out a detailed study regarding the extent of damage caused to the environment by these units. The Hon'ble NGT also directed all the units to ensure compliance of following directions:

1. *All the Units must ensure continuous running of ETPs even during the non-crushing season for the adequate maintenance of required bio-mass so that the ETP is able to take the load/shock when it receives the pollution load/effluent at the start of the crushing season.*
2. *All the Units in question must provide for separate Energy Meter for entire ETP setup including its accessory units with data logging facility which shall be inspected by UPPCB and CPCB from time to time.*
3. *UPPCB must ensure Interlocking of Pollution Control Devices with production processes (one way but not vice versa) so as to ensure that whenever ETPs/PCDs are intentionally closed, the production also comes to halt.*

4. *Regular inspections should be carried out by the statutory authorities in both halves of the crushing season and also at least once in non-crushing season.*
5. *Since the Asmoli Unit falls in the critical zone with respect to ground water withdrawal, an assessment of water recharge needs to be carried out by CGWA or UPGWB before* issuance of NOC.

Hon'ble NGT judgement dated 01-09-2021 is annexed at **Annexure 1B.**

The concerned industrial units filed a Civil Appeal (C.A. No. 5975/2021) before Hon'ble Supreme Court of India on **20-09-2021** against Hon'ble NGT judgement dated 01-09-2021.

1.3 The Hon'ble Supreme Court order dated 08-10-2021 in CA no 5975/2021

The Hon'ble Supreme Court of India passed an order dated 08-10-2021 directing for conduct of the detailed study as directed in order impugned (Hon'ble NGT order dated 01-09-2021). The Hon'ble Supreme Court of India order dated 08-10-2021 is annexed at **Annexure-1C.**

In compliance to Hon'ble NGT order dated 01-09-2021 and Hon'ble Supreme Court order dated 08-10-2021, a joint team from CPCB, UPPCB and District Administration carried out a detailed study during Nov-Dec 2021 to assess the extent of damage caused to the environment by the concerned industrial units and report titled "Detailed study report on Extent of damage caused to the environment" was submitted before Hon'ble Supreme Court of India in Jan 2023, hereinafter referred as detailed report Jan 2023.

1.4 The Hon'ble Supreme Court order dated 06-09-2024 in CA no 5975/2021

The Hon'ble Supreme Court of India vide order dated **06-09-2024** further directed CPCB and SPCB to file a joint report indicating compliances of directions of the Hon'ble NGT, subsequent committee reports and conditions specified in environmental clearances. The Hon'ble Supreme Court of India order dated 06-09-2024 is annexed at **Annexure-1D.**

2. Compliance of the Hon'ble Supreme Court order dated 06-09-2024

The joint committee of CPCB & UPPCB carried out inspection of the four industrial units (referred above) during October 2024. Also, it is pertinent to mention that earlier all units were part of M/s Dhampur Sugars Ltd. Now, after demerger of companies, units in Asmoli and Meerganj belong to the company namely "M/s Dhampur Bio-organics Ltd." and units in Dhampur belong to the company namely "M/s Dhampur Sugars Ltd".

During inspection, the team collected the samples from aeration tanks of effluent treatment plants (ETPs), Sewage Treatment Plant (STP), bore wells

and recipient drain and checked logbooks for ETPs, STPs, bore wells, ash & sludge generation, energy consumption. The team also verified the compliance status on the recommendation of past reports namely a) detailed report Jan 2023, b) joint inspection report dated 26-03-2021, c) Hon'ble NGT order dated 01-09-2021 and d) specific conditions in environmental clearance.

During visit, all units were found non-operational. Three sugar mills were non-operational due to closing of crushing season and the fourth unit, a distillery, was non-Operational due to shortage of raw material (molasses / grain). However, it is proposed that UPPCB shall carry out random inspections of the units in operational condition.

The detailed site inspection reports of the four industrial units are annexed as **Annexure-A to Annexure-D**. The compliance of general conditions of environmental clearance is mostly covered within the information provided in the report and the compliance status in respect of specific/salient conditions of environmental clearance is provided in a separate section in individual reports. Report of each industrial unit, as at **Annexure -A to Annexure-D** is divided into six parts:

Part A: General information

Part B: Verification of compliance status on the findings/recommendation of the detailed report Jan 2023

Part C: Verification of compliance status on the findings/recommendation of joint inspection report dated 26-03-2021

Part D: Verification of compliance of the directions of Hon'ble NGT judgement dated 01.09.2021.

Part E: Verification of specific/salient conditions of Environmental Clearance

Part F: Conclusion & Recommendations

Unit wise conclusions and recommendations are reproduced below:

2.1 M/s Dhampur Bio Organics Ltd., Unit-Asmoli, District Sambhal (Sugar Unit)

Conclusion:

1. Unit was non-operational during joint site inspection by CPCB and UPPCB on 10.10.2024 due to non-crushing season. During survey of the surroundings of the unit and Sot river, no coloured water was visible at the time of visit.
2. The ground water sample analysis result does not indicate impact due to the industry.
3. The unit has complied with the recommendations of Joint Inspection report dated 13th January 2021. Details of the same are mentioned in Part C of the report.

4. The details of the verification of the directions of Hon'ble NGT passed vide judgement dated 01.09.2021 are mentioned in Part D of the report. Unit has complied all the points except the directions regarding interlocking of Pollution Control Devices with production processes.
5. The detailed compliance status of Environmental Clearance (EC) conditions is mentioned at Part E of the report. The unit has not compiled with the following conditions:
   i. No rainwater harvesting system was observed in the plant.
   ii. Not installed CAAQMS.

Inspections by third party institutes authorised by CPCB in the past:

A third party technical institutes authorised by CPCB carried out inspection of the unit in operational condition on 20-02-2022 and 01-03-2023 and unit was found complying standards during both inspections.

Recommendations:

1. The unit shall maintain the ash disposal record with respect to disposal and distribution.
2. Unit shall implement a system for interlocking of the pollution control plants / devices and the production process, as directed by Hon'ble NGT-PB.
3. UPPCB shall carry out random inspection of the unit in operational condition.
4. Unit shall comply with following EC conditions:
   i. Install CAAQMS stations as per EC condition.
   ii. Make provision for rain water harvesting as per EC condition.

2.2 M/s Dhampur Bio Organics Ltd., Unit-Meerganj, District Bareilly (Sugar Unit)

Conclusion:

1. Unit was non-operational during joint site inspection by CPCB and UPPCB on 18.10.2024 due to non-crushing season. During survey of the surroundings of the unit and Sot river, no coloured water was visible at the time of visit.
2. The ground water sample analysis result does not indicate impact due to the industry.
3. The unit has complied with the recommendations of Joint Inspection report dated 13th January 2021. Details of the same are mentioned in Part C of the report.
4. The details of the verification of the directions of Hon'ble NGT passed vide judgement dated 01.09.2021 are mentioned in Part D of the report. Unit has complied all the points except the directions regarding interlocking of Pollution Control Devices with production processes.
5. The detailed compliance status of Environmental Clearance (EC) conditions is mentioned at Part E. The unit has not compiled with the following conditions:

   i. No rainwater harvesting system was observed in the plant.
   ii. Not installed CAAQMS.

Inspections by third party institutes authorised by CPCB in the past:

A third party technical institutes authorised by CPCB carried out annual inspection of the unit in operational condition on 17-01-2022 and 15-02-2023 and unit was found complying standards during both inspections.

Recommendations:

1. The unit shall maintain the ash disposal record with respect to disposal and distribution.
2. Unit shall implement a system for interlocking of the pollution control plants / devices and the production process, as directed by Hon'ble NGT-PB.
3. UPPCB shall carry out random inspection of the unit in operational condition.
4. Unit shall comply with following EC conditions:
    i. Install CAAQMS stations as per EC condition.
    ii. Make provision for rain water harvesting as per EC condition.

2.3 M/s Dhampur Sugar Mills Limited, Village Alhaipur, Tehsil Dhampur, District Bijnor (Sugar Unit)

Conclusion

1. Unit was non-operational during joint site inspection by CPCB and UPPCB on 16.10.2024 due to non-crushing season.
2. Analysis results of samples collected from Ikra drain and bore well indicate no industrial impact.
3. The unit has complied with recommendations of Joint Inspection report dated 02-03 Feb 2021 (detailed findings in Part C), except following:

    a. Unit has not reclaimed/filled up 4000 m^3 capacity lagoon near its agricultural fields completely. It was partially filled with mud and rainwater and HDPE lining still exists.
    b. Unit has not implemented the suggestion to enhance capacity of water tank for filter backwashing The unit explained that the existing capacity has been sufficient which can be verified in periodic inspections of the unit in operational condition by UPPCB.

4. The details of the verification of the directions of Hon'ble NGT passed vide judgement dated 01.09.2021 are mentioned in Part D of the report. Unit has complied all the points except the directions regarding interlocking of Pollution Control Devices with production processes.

Inspections by third party institutes authorised by CPCB in the past

A third party technical institutes authorised by CPCB carried out annual inspection on 12-01-2022 and 14-02-2023. Unit was found not complying standards during inspection on 12-01-2022 and UPPCB issued show-cause notice to the unit on 22-

02-2022 which was later withdrawn as unit was found complying standards in subsequent inspection by UPCB. Unit was found complying standards during inspection on 14-02-2023 by third party technical institute authorised by CPCB.

Recommendations:

1. The unit shall either cover the 4000 m3 capacity earthen lagoon, which was used for storing treated effluent in the past, with brick-lining or reclaim/fill up it completely.
2. Unit shall implement a system for interlocking of the pollution control plants / devices and the production process, as directed by Hon'ble NGT-PB.
3. UPPCB shall carry out random inspection of the unit in operational condition.

2.4 M/s Dhampur Sugar mills limited Chemical Division., (Distillery Division) Dhampur District Bijnor on 16.10.2024

Conclusion:

1. Unit was non-operational during joint site inspection by CPCB and UPPCB on 16.10.2024 due to shortage of raw material (molasses & grain).
2. The unit has complied with the recommendations of Joint Inspection report dated 02nd Feb 2021. Details of the same are mentioned in Part B of the report.
3. The detailed compliance status of Environmental Clearance (EC) conditions is mentioned at Part C. The unit has not compiled with the following conditions:
    a. DG is not provided with acoustic enclosure.

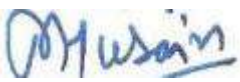
Inspections by third party institutes authorised by CPCB in the past:

A third party technical institutes authorised by CPCB carried out annual inspection of the unit in operational condition on 15.01.2022 and 18.03.2023 and the unit was found complying no effluent discharge condition during both inspections.

Recommendations:

1. Unit shall provide acoustic enclosure at the DG set.
2. UPPCB shall carry out random inspection of the unit in operational condition.

Signature of Inspection Team

S.No.	Inspecting Officials	Signature
CPCB officials (Inspected all four units)		
1.	Sh. Nazimuddin, Scientist 'F', DH- IPC-II, CPCB, Delhi	
2.	Mrs Reena Satavan, Scientist 'E', CPCB, Delhi	
UPPCB Officials (concerned Regional Office)		
M/s Dhampur Bio Organics Ltd., Unit-Asmoli, District Sambhal (Sugar Unit)		
3.	Sh. Ashutosh Chauhan, **Regional Officer- Moradabad**, UPPCB,	
4.	Shri J. N Tiwari, AEE, UPPCB	
M/s Dhampur Bio Organics Ltd., Unit-Meerganj, District Bareilly (Sugar Unit)		
5.	Sh. Chandresh Kumar, **Regional Officer- Bareilly**, UPPCB	
6.	Sh. S.S Chauhan, ASO, Regional Office-Bareilly, UPPCB	
M/s Dhampur Sugar Mills Limited, Village Alhaipur, Tehsil Dhampur, District Bijnor (Sugar & Distillery Unit)		
7.	Sh. Vijay, **Regional Officer- Bijnor**, UPPCB	
8.	Sh. Mahir Hussain, AEE, UPPCB	

Annexure-A

Detailed site visit report of M/s Dhampur Bio Organics Ltd., Unit-Asmoli, District Sambhal (Sugar Unit) on 10.10.2024

Part A: General Information

1.	**Name of the unit with complete postal address**	M/s Dhampur Bio Organics Ltd, Unit- Asmoli, Division-Sugar (formerly M/s DSM Sugar Asmoli), Village & Post- Asmoli, Sambhal,(U.P) Pin.244304
2.	**Spatial Co-ordinates Latitude and longitude**	Latitude: 28.708025 Longitude: 78.542197
3.	**Year of commissioning**	1994-95
4.	**Category**	Sugar refinery with power cogeneration of 41 MW
5.	**Start period of crushing season**	07th November 2023 (closed on 09.04.2024)
6.	**No. of Operational days**	149
7.	**Operational status during visit**	Non-operational (due to off-season)
8.	**Consented capacity of sugar Mill (TCD)**	12500 ton cane crushing per day (TCD)

Consent & EC status

9.	**Consent status & its Validity with date**	Consolidated Consent, 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 (CCA) issued by UPPCB dated 04.09.2023 with validity upto 31.12.2024. Consolidated consent is attached at **Annexure-2A.**
10.	**Environmental Clearance (EC)**	Yes, EC issued on 22nd June 2023 for capacity expansion from 9000 TCD to 14000 TCD. EC is attached at **Annexure-2B.**

Source of Fresh Water

12	**Bore well/Tube well/ Any other & its No's**	3 Numbers of borewell
	Flow meter Installation at wells (Yes/No)	Yes
13.	**NOC from CGWA/UPGWD & its Validity with date**	Unit has UPGWD NOC for groundwater abstraction from 03 no. of bore well, having validity up to 26.06.2026. As per the conditions of NOC of UPGWD, the unit can abstract groundwater at a maximum rate of 138000 KL/annum (60000 KL/annum from bore well -1, 60000 KL/annum from borewell -2 and 18000 KL/annum from borewell -3 annually). NOC for groundwater abstraction from 03 bore wells are attached at **Annexure-2C-a, 2C-b and 2C-c.** As per the records it was observed that the unit has abstracted total 13609 KL of fresh water from 03 borewells in the month of March 2024 i.e. 439 KLD, which is within the permissible limit of 1800

		KL/day groundwater abstraction mentioned in the No Objection Certificate (NOC) issued by UPGWD.

Process Effluent Treatment Plant

14.	**Treatment ETP Capacity**	2800 KLD
15.	**Treatment ETP Scheme**	Oil skimmer→ Equalization Tank→ Primary Clarifier→ lamella Clarifier→ Buffer Tank→ Anaerobic Digester followed by Aeration Tank→ Clarifiers → Multi Grade Filter & Activated Carbon Filter→ lagoon→ irrigation
16.	**Disposal/reuse of treated effluent**	01 no. of brick-lined treated effluent storage lagoon of capacity 16000m^3 On the day of the visit the lagoon was found dry and empty. During sugar crushing season, after treatment, the unit stores its treated effluent in the lagoon of capacity 16000m^3 for further use in irrigation. Unit is having irrigation management plan prepared by NSI, Kanpur for Command area 215 Hectare.

Process Condensate Polishing Plant (CPU)

17.	**Treated capacity of Condensate polishing system adopted by the unit**	To treat the process condensate, unit has installed condensate polishing unit (CPU) of capacity 36 m3/hr
18.	**Treated scheme of the CPU**	Multi Grade Filter (MGF), Activated Carbon Filter (ACF), followed by Fouling resistance membrane Reverse Osmosis system
19.	**Use of treated Condensate**	Treated condensate from CPU is used for make-up of Co-Gen Cooling Tower

Sewage Treatment Plant

20.	**Operational Status**	Operational
21.	**Treatment Capacity (KLD)**	60 KLD
22.	**Source of domestic sewage**	Staff quarters, worker's colony, guest houses, canteens etc.
23.	**Treated Scheme**	Holding tank → Equalization tank → Aeration tank (MBBR technology) → Multi grade Filter and Activated Carbon Filter
24.	**Flow meters at inlet and outlet of STP**	Installed
25.	**Treated water re-use/disposal**	As per the consent the treated effluent has to be recycled to the maximum extent and should be reused within the premises for gardening etc. As observed by the team, the treated effluent from STP was being used for gardening purpose within the premises and the overflow was discharged into the drain located behind the premises.

Air Pollution Sources

26.	**Details of Boilers, type of fuel used,**	**Boilers** (all boiler are bagasse-fired)	**Steam Generation Capacity** (Ton Per Hour)	**APCD installed**	**Stack No.**	**Stack height**
		Boiler-1	170	ESP	1	72 mtrs
		Boiler-2	70	Wet Scrubber	1 Common stack	60 mtrs
		Boiler-3	50	ESP		
27.	**Online emission (OCEMS) monitoring system installed**	Installed and connected with CPCB & SPCB server for Particulate Matter (PM)				

Ash Generation Details

28.	**Ash Generation**	Ash generation for the period from Nov, 2023 to March 2024 was as follows:

Month	**Nov**	**Dec**	**Jan**	**Feb**	**March**	**April**
Ash generation (Ton)	1287.78	1730.38	1499	1635	1784	222.89

29.	**Ash management and Disposal**	Ash is mixed with Press mud and used as manure by local farmers.

Part B: Verification of detailed report Jan 2023

During 17th-18th Nov 2021, survey and monitoring of nearby villages around the Dhampur Bio-Organics Ltd., Asmoli unit and monitoring of Sot River was carried out to assess the impact on ambient environment. For assessment of present situation, team carried out survey of surroundings of the unit, Sot river and ground water sampling.

Survey of the surrounding

i. The joint team visited the drain located behind the boundary wall of the unit adjacent to ETP and STP area. It was observed that the over flow from STP outlet after reuse in gardening was being discharged into the drain which finally meets Sot River. Sample from the drain was collected. The analysis result **(Annexure 2D)** of the samples are as follows:

Table :1 Analysis Results of drain outside the unit premises

Parameters	Analysis Results	General Discharge standards
pH	8.1	**5.5-9.0**
COD (mg/l)	BDL	**250**
BOD (mg/l)	BDL	**30**

TSS (mg/l)	16	**100**
TDS (mg/l)	364	**-**
PO4-P	0.5	**-**
NO_3-NO (mg/l)	0.68	**-**
NH3-N	2	**50**

ii. Team also surveyed the stretch of Sot River from upstream of unit (Asmoli Madhan road near the boundary wall of unit, Lat.28.71078 Long. 78.54396) to the confluence of unit drain effluent channel in the river. (Lat.28.71205 Long. 78.56318). The team observations vis-a-vis observations as per visit 17-18th Nov, 2021 are tabulated below:

Table 2: Observations on Sot River

S.No	Location	Observations as per visit 17-18 Nov 2021	Observations as per visit 10 Oct 2024
1.	River Sot on Asmoli Madhan Road near Akbarpur Gohra u/s of DSM Unit Asmoli (28.7109541 Long. 78.5437542)	- River Sot on Asmoli-Madhan road near the DSM unit boundary was found dry on the culvert. - Ploughing of river bed observed behind the unit boundary for farming.	At this location stagnant rain water was observed in the river.
2.	Behind the boundary wall of the unit.	-	River was found dry with patches of rain water. Parallel to river, drain from the unit carrying overflow of STP treated effluent was observed. The samples from STP was collected from the drain and the analysis results (depicted in table-1) indicates no industrial impact
3.	River Sot Near Asmoli Shamshan Ghat d/s of DSM unit (Lat. 28.71199, Long. 78. 55002)	- The river bed at the location behind the DSM Asmoli unit, near Asmoli Shamshan Ghat was found dry with small patches of water. - Flow in river observed through a closed pipeline at this location near river boundry.	Stagnant water was observed in the river which was largely fed with rain water and the effluent of the unit's drain/pipeline. No coloured water was visible at the time of visit, however it is pertinent to mention that unit was non-operational due to non-crushing season.

		- River at this location is largely fed with the wastewater coming from the mill as well as storm water during rain. - River bed observed dark-brown in colour.	
4.	Confluence of unit drain in the river. (Lat.28.71205 Long. 78.56318).	-	At the confluence point of River sot and drain, the river was found covered with water hyacinth.

Ground water Assessment

To assess the quality of ground water, the team collected ground water sample from borewell of school located in Ram Nagar Village (located on Right bank of Sot River). Analysis results are attached at **Annexure 2D** and are tabulated below:

Table 3: Analysis results of samples collected from Borewell

Parameters	Analysis Results	BIS IS 10500:2012 (Permissible limit in absence of alternative source)
pH	7.3	**6.5-8.5**
Conductivity (µmho/cm)	715	**-**
Color (colour units)	BDL	**15**
TSS (mg/l)	11	**-**
BOD (mg/l)	BDL	**-**
COD (mg/l)	04	**-**
TDS (mg/l)	400	**2000**
Total hardness as $CaCO_3$ (mg/l)	323	**600**
Total alkalinity as $CaCO_3$(mg/l)	310	**600**
PO4	0.08	**-**
NO3-N	1.93	**-**
F-	BDL	**1.5**
Chloride (mg/l)	17	**1000**
Sulfate (mg/l)	58	**400**
As (mg/l)	BDL	**0.05**
Cd (mg/l)	BDL	**0.003**
Co (mg/l)	BDL	**-**
Cr (mg/l)	BDL	**0.05**
Cu (mg/l)	BDL	**1.5**
Fe (mg/l)	0.031	**0.3**

Mn (mg/l)	0.174	**0.3**
Ni (mg/l)	BDL	**0.02**
Pb (mg/l)	BDL	**0.01**
Sb (mg/l)	BDL	**-**
Se (mg/l)	BDL	**0.01**
V (mg/l)	BDL	**-**
Zn (mg/l)	0.033	**15**

Analysis results of the samples collected from the ground water of Village Ram Nagar indicates no industrial impact.

Part C: Verification of the recommendations of joint inspection report dated 26-03-2021

S.No.	Recommendations by Joint inspection report dated 26-03-2021	Verification by joint team as on date 10-10-2024
1.	The unit shall provide suitable capacity dosing pump for dosing of chemicals like lime and polyelectrolyte solution for optimum utilization of chemical as per feed flow condition.	Lime dosing pump was installed before equalization tank & poly dosing pumps were found installed at the primary clarifier outlet. Also, poly dosing pumps in decanter Feed line were observed.
2.	The unit shall safely dispose scrap/metal	The unit has sold 1450 kg of scrap to M/s A.S scrap traders in the month of August 2024. The copy of invoice for selling scrap is annexed at **Annexure-2E**
3.	The unit shall commission decanter for better sludge management	Decanter of capacity 05 m^3/hr was found installed. ***(refer Photograph no. 4)***
4.	The unit shall repair partition wall sludge drying bed	Unit has dismantled the sludge beds and has installed decanter of capacity 05 m^3/hr for sludge management.
5.	The unit shall install condensate Polishing unit	Condensate polishing unit (CPU) of capacity 36m^3/hr has been installed for treatment of cooling tower & boiler blowdown. The treatment scheme of CPU is as follows: ***Condensate underground reservoir (UGR) tank→transfer pump→ Multigrade filter (MGF) → Activated carbon filter (ACF)→***

		bag filter→micron cartridge filter→Reverse Osmosis (RO)→ RO reject goes to ETP and RO permeate (treated condensate) is used in co-gen & cooling tower
6.	The unit shall install STP for treatment of sewage generated from residential colony as soon as possible. The unit shall restrict the drainage of domestics sewage into irrigation channel coming from residential area.	The unit has installed sewage treatment plant (STP) of capacity 60 KLD for treatment of domestic effluent generated from the staff quarters, worker's colony, guest houses, canteens, bathrooms, kitchen and laundry etc. The STP consist of the following scheme: ***Holding tank → Equalization tank → Aeration tank (MBBR technology) →Multi grade Filter and Activated Carbon Filter*** STP treated effluent is used for gardening purpose. • On the day of the visit, Sewage Treatment Plant (STP) was found operational. Untreated and treated sewage samples were collected from the inlet and final outlet of STP. • Flow meters were found installed at the inlet & outlet of STP. ○ Reading of STP inlet flowmeter: Instantaneous-6.82m^3/hr; Totalizer- 34608 m^3 ○ Reading of STP outlet flowmeter: Instantaneous- 3.7m^3/hr; Totalizer 32721.4 m^3 • Unit has maintained logbook of STP operations. Logbooks of STP inlet and outlet were collected for the month of September 2024 and the details are as follows: **Month** | **No of days** | **STP Inlet (kl)** | **STP Outlet (kl)** Sept. 2024 | 30 | 999 | 959 Average flow: Inlet-33.3KLD & Outlet-31.9KLD

Table 4: Analysis results of samples collected from STP

Sr. No.	Location	pH	COD (mg/l)	BOD (mg/l)	TSS (mg/l)	TDS (mg/l)	PO4-P (mg/l)	NH3-N	NO_3-N (mg/l)
1.	STP Inlet	7.1	45	16	15	376	0.3	-	BDL
2.	STP Outlet	8.2	BDL	BDL	BDL	496	4.3	1	8.26
Standards mentioned in CCA issued by UPPCB on 19.09.2022		5.5 – 9.0	-	30					

STP was found complying w.r.t. the standards prescribed in the Consent issued by UPPCB

7.	The unit shall obtain the NOC from ground water department, UP as soon as earliest	The unit has obtained NOC from Uttar Pradesh Ground Water Department (UPGWD) dated 06.07.2021 for groundwater abstraction from 03 no. of bore wells, having validity up to 26.06.2026. As per the conditions of NOC, the unit can abstract groundwater at a maximum rate of 138000 KL/annum (60000 from bore well -1, 60000 from borewell -2 and 18000 from borewell -3 annually).

Part D: Verification of the directions of Hon'ble NGT judgement dated 01.09.2021.

S.No.	Recommendations of Hon'ble NGT Judgement dated 01-09-2021	Compliance status as on 10-10-2024
1.	All the Units must ensure continuous running of ETPs even during the non-crushing season for the adequate maintenance of required bio-mass so that the ETP is able to take the load/shock when it receives the pollution load/effluent at the start of the crushing season.	At the time of visit, the unit was non-operational due to off-season. Team observed that the ETP was under stabilization. For the maintenance of adequate bio-mass aeration tank was found operational. Sample was collected from the aeration tank and the analysis results are as follows: MLSS = 1916 mg/l MLVSS =1323 mg/l Analysis results showed MLVSS/MLSS ratio as 0.69 which indicates that unit is in process of developing active biomass for stabilizing ETP prior to commencement of crushing season.

<table>
<tr><td>2.</td><td>All the Units in question must provide for separate Energy Meter for entire ETP setup including its accessory units with data logging facility which shall be inspected by UPPCB and CPCB from time to time.</td><td>Separate energy meter was found installed for the ETP. The unit has maintained log book of energy consumption. The team collected log book of energy meter for the period from Nov 2023 to March 2024 and the details are as follows:
<table>
<tr><th>Month</th><th>Consumption(KWH)</th></tr>
<tr><td>Nov, 2023</td><td>66176.0</td></tr>
<tr><td>Dec, 2023</td><td>59564.8</td></tr>
<tr><td>Jan 2024</td><td>73886.4</td></tr>
<tr><td>Feb, 2024</td><td>64409.6</td></tr>
<tr><td>March, 2024</td><td>65481.6</td></tr>
<tr><td>April, 2024</td><td>53547.2</td></tr>
<tr><td>May, 2024</td><td>54556.8</td></tr>
<tr><td>June 2024</td><td>24297.9</td></tr>
<tr><td>July,2024</td><td>41588.8</td></tr>
<tr><td>Aug,2024</td><td>34528.0</td></tr>
<tr><td>Sep,2024</td><td>34636.96</td></tr>
</table></td></tr>
<tr><td>3.</td><td>UPPCB must ensure Interlocking of Pollution Control Devices with production processes (one way but not vice versa) so as to ensure that whenever ETPs /PCDs are intentionally closed, the production also comes to halt.</td><td>UPPCB directed the unit to comply this direction of Hon’ble NGT. The unit represented in this regard that sugar production is a continuous process and if the production process is stopped suddenly the sugarcane juice and juice concentrates in the process will clog and it will be very difficult to clean the plant and resume production.</td></tr>
<tr><td>4.</td><td>Regular inspections should be carried out by the statutory authorities in both halves of the crushing season and also at least once in non-crushing season.</td><td>During crushing season 2022-23 and 2023-24, sampling was carried out three times i.e. on 14-02-2023, 21-03-2023 & 09.12.2023 by UPPCB. Unit was found complying standards during all these inspections. Analysis reports are attached at Annexure 2F-a, 2F-b and 2F-c.
Also, third party technical institutes authorised by CPCB carried out inspection on 20-02-2022 & 01-03-2023 and unit was found complying standards during both inspections. The reports are attached at Annexure 2F-d and Annexure 2F-e.</td></tr>
<tr><td>5.</td><td>Since the Asmoli Unit falls in the critical zone with respect to ground water withdrawal, an assessment of water recharge needs to be carried out by CGWA or UPGWB before issuance of NOC.</td><td>As per notification dated 06-02-2024 regarding amendment in Section 9 of Uttar Pradesh Ground Water (Management and Regulation) Act, 2019 (Uttar Pradesh Act No. 13 of 2019), districts are divided into blocks and as per categorisation of blocks based on water depletion updated during 2023, Asmoli block now falls under semi critical zone. Reference for same is attached at Annexure 2G.</td></tr>
</table>

		Unit has obtained valid ground water for groundwater abstraction from 03 no. of Borewell dated 06.07.2021having validity upto 26.06.2026 with NOC no. NOC012653, NOC039759 and NOC034938. As per the conditions of NOC of UPGWD, the unit can abstract groundwater at a maximum rate of 138000 KL/annum (60000 from bore well -1, 60000 from borewell -2 and 18000 from borewell -3 annually).

Part E: Verification of specific/salient conditions of Environmental Clearance (EC):

The Unit has obtained Environment Clearance (EC) dated 22.06.2023 from Ministry of Environment, Forest & Climate Change (MoEF&CC) for expansion of existing sugar unit from 9000 TCD to 14000 TCD without change in existing co gen power capacity 41 MW within existing industry premises. During visit on 10.10.2024 team verified the compliance of the major EC conditions.

The status of specific/salient EC conditions is mentioned below;

1. Compliance status of specific conditions:

I. Discharge should be as per MoEF&CC Guidelines.

Status as verified by team:

i. The unit has installed effluent treatment plant of capacity 2800KLD having treatment scheme up to tertiary treatment level. The scheme is as follows:

Equalization Tank→Primary Clarifier→ lamella Clarifier→ Buffer Tank→Anaerobic Digester followed by Aeration Tank→Clarifiers →MGF & ACF

However, ETP was found under stabilization at the time of visit due to off-season. Therefore, sampling was done only from aeration tank and quality & quantity of discharge can't be verified. Sample analysis of aeration tank indicated MLSS: 1916 mg/l and MLVSS: 1323 mg/l.

ii. The unit has installed **Sewage Treatment Plant (STP)** of 60KLD to treat domestic sewage, which was found operational on the day of visit. As per the analysis results the STP was found complying the standards prescribed in the Consent. The details are already mentioned at Point 6 of above Part C.

II. PP shall install Continuous Ambient Air Quality Monitoring Station (CAAQMS)

Status as verified by team:

i. CAAQMS has not been installed by the PP.

III. **Disposal of fly ash shall be done within the premises.**

Status as verified by team:

i. As informed by the unit representative the ash is mixed with Press mud and given to local farmers to be used as manure. However, at the time of visit, as the unit was non-operational therefore, no fly ash was observed by the team within the premises.

IV**. Three tier green belt shall be developed with native species all along the periphery of the project. Site survival rate of green belt developed shall be monitored on periodic basis to ensure that damaged plants are replaced with new plants in the subsequent years (Miyawaki method to be adopted for plantation)**

Status as verified by team:

i. A three-tier green belt is a plantation with three layers of trees, shrubs, and grasses, designed to help control pollution and improve the environment. It was observed that the unit has developed lawns in front of guest house followed by shrubs and trees.
ii. Out of total plant area of 34.5 hectare, green belt has been developed on 10.52-hectare area i.e 30.4% of which 6.39 ha is green area and 4.13 ha is landscape area.
iii. During visit team observed that green belt is majorly developed near ETP & STP area, guest house and colony. Dense plantation was observed near ETP area which was developed using Miyawaki technique. Also, trees of Shisham, Neem, Mango, Arjun, Jamun, etc. were observed along the roadside & industry periphery. Green patches were also developed in between the plant area. As per the details provided by the unit, the details of existing trees/shrubs at project site is as follows:

Sl. No.	Location	No. of Plants	Species Details
1	Near Colony & Roadside	5050	Shisham,Neem, Pakad, Pahadi neem, mango, Arjun, jamun, Shaguan etc.
2	Near ETP (Miyawaki)	6000	Kaim,Haldu, Desi Babool, Saaja, doodhi,Neem, Pipal, Guava, Ficus,Shami,mahua, Kosum, Aamla, Dhak,

			Baheda, Karanz, Amaltas, Satavari,Jamun, sadabahar, Khazur,Kaans, Sheesham etc.
3	Along the Periphery and inside the Plants	5500	Semal, Moorpankh, Ashok, Mango, Neem, Banyan,Bottles Brush, Kadamb, Silver Oak, Pal Tree, Gul Mohar, Goolar, kaner, Harsingar, Plumeria Alba, Saguan,Pilkhan- etc.
Total		**16550**	

V. Performance test shall be conducted on all pollution control system every year and report shall be submitted to regional office of the MoEF and CC.

Status as verified by team:

Unit conducts analysis of ETP (inlet & outlet) samples and stack monitoring through third party (NABL accredited) laboratory and submits the reports along with 6 Monthly Compliance Report to MoEF&CC. As per reports, last ETP monitoring was carried out on 20-03-2024 and ambient air quality monitoring was conducted on 16-02-2024.

ETP inlet sample results indicate pH- 5.8, BOD- 412 mg/l, COD- 2872 mg/l, TSS-196 mg/l, TDS- 1360 mg/l and Oil & Grease-13.4 mg/l whereas ETP outlet sample results indicate pH- 7.6, BOD- 14 mg/l, COD- 92 mg/l, TSS-10.4 mg/l, TDS- 1660 mg/l and Oil & Grease-BDL. ETP results indicate compliance w.r.t notified discharge norms.

Ambient air quality monitoring was conducted on 16.02.2024 near main gate, boiler, gahre ki madaiyanan and Asmoli village are as follows:

Location	**PM 10 (µg/m³)**	**PM 2.5 (µg/m³)**	**SO_2 (µg/m³)**	**NOx (µg/m³)**
Near Main gate	88.4	53.58	14.98	22.15
Near Boiler	79.4	48.75	13.22	20.58
Near gahre ki madaiyan	75.9	47.32	13.42	19.85
Near Village Asmoli	76.3	46.01	12.49	17.55
Standard	**100**	**60**	**80**	**80**

Analysis results indicate compliance w.r.t notified parameters.

Unit has carried out adequacy assessment of ETP by NSI, Kanpur on 26-27 Oct 2023. As per adequacy report, the capacity of existing ETP to work as common ETP is considered adequate @14000 TCD with maximum effluent generation of 200 L/ton of cane.

***VI.* Greening and paving shall be implemented in the plant area to arrest soil erosion and dust pollution due to exposed soil surface.**

Status as verified by team:

In plant area team observed patches of greenery and tiled paved surface ***(refer photograph no. 12).***

VII. Properly covered vehicles shall be used while transporting material and product.

Status as verified by team:

At the time of visit no transportation of material and product was taking place as the unit was non-operational.

VIII. Allergy test should also be included in health check-up of works.

Status as verified by team:

Health check-up of all the employees for identification of occupational health hazard on bi-annual basis is being conducted by the unit where blood tests, eye check-up, telemetry test, respiratory system check-up were done by panel of MBBS doctors. Sample report of an employee is attached as **Annexure 2H** for reference.

IX. Industry should comply with the CPCB charter guidelines for sugar units and treated effluent shall be used for the different purposes as per the requirements in the industry

Status as verified by team:

i. The compliance status of salient points of Sugar Charter are as following:
   a) The unit has tertiary level effluent treatment plant of 2800 KLD capacity.
   b) Installed electromagnetic flow meters at ETP inlet, outlet and all three borewells.
   c) Maintained daily records of fresh water consumption, effluent discharge, regular analysis of ETP effluent parameters, energy consumption, CPU & STP operations etc.
   d) Installed CPU of capacity 36m^3/hr.
   e) Installed decanter of 5 m^3/hr capacity for sludge handling.
   f) Developed environmental laboratory for the analysis of DO, pH, BOD, COD, TSS & TDS and MLSS parameters of ETP inlet and outlet.
   g) Developed Environmental Management Cell (EMC)
   h) Prepared Irrigation Management Plan from NSI, Kanpur for 215hectare command area. Have lagoon of capacity 16000m^3 capacity for storage of the treated effluent to be used for irrigation purpose.
   i) As per adequacy assessment of ETP carried out by NSI, Kanpur on 26-27 Oct 2023, the capacity of existing ETP to work as common ETP is considered adequate @14000 TCD with maximum effluent generation of 200 L/ton of cane.

j) Installed Online effluent & emission (OCEMS) monitoring system at ETP outlet & boiler stack respectively and provided its connectivity to CPCB and SPCB servers

2. Compliance status of major standard conditions:

I. **Statutory Compliance**:

i. The unit has obtained Consolidated Consent & Authorization issued by UPPCB dated 04.09.2023 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 Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 with a validity upto 31.12.2024.

ii. The unit has obtained UPGWD NOC for groundwater abstraction from 03 no. of borewell, having validity upto 26.06.2026. As per the conditions of NOC of UPGWD, the unit can abstract groundwater at a maximum rate of 138000 KL/annum (60000 from bore well -1, 60000 from borewell -2 and 18000 from borewell -3 annually).

II. **Air Quality Monitoring & Preservation:**

i. Online Continuous Effluent Monitoring System (OCEMS) is installed in all the Boiler Stacks & it is connected to CPCB & UPPCB Server.

ii. Unit carries out Ambient Air Quality (AAQ) monitoring at four designated locations which were residential colony, near Boiling house, Co-Gen near DM plant and ETP area. The last monitoring was carried out on 16.02.2024 by NABL accredited & EPA recognised laboratory. Analysis results are mentioned in point V of EC conditions.

iii. Installed an Electrostatic Precipitator (ESP) on the stack of the 170 Ton Per Hour (TPH) boiler and a Wet Scrubber on the common stack of the 70 TPH and 50 Ton Per Hour (TPH) boilers.

iv. The unit doesn't use any coal rather it exclusively uses bagasse as fuel in all the three Boilers of capacity 170 Ton Per Hour (TPH), 70 Ton Per Hour (TPH) & 50 Ton Per Hour (TPH). These boilers are equipped with two stacks, with heights of 72 meters (170 TPH) and 60 meters (common for 70 & 50 TPH).

v. It was observed that unit has 01 DG set of capacity 750 KVA having Stack height of 16 mtrs.

III. **Water quality monitoring and preservation**

i. Flow meters were found installed at the inlet and outlet of ETP and same are connected to CPCB & UPPCB Server. ***(refer photograph no 5 & 6)***

ii. Separate storm water drain was observed within the premises.

iii. As the unit was non-operational hence, the compliance of ETP with discharge norms couldn't be verified.

iv. Unit has obtained UPGWD NOC for groundwater abstraction from 03 no. of borewell, having validity upto 26.06.2026. As per the records it was observed that the unit has abstracted total 13609 KL of fresh water from 03 borewells in the month of March 2024 i.e. 439 KLD, which is within the permissible limit of 1800 KL/day groundwater abstraction mentioned in the No Objection Certificate (NOC) issued by UPGWD.

v. The unit has Effluent Treatment Plant (ETP) of capacity 2800 KLD. During visit the unit was found non-operational due to season off, however the Effluent Treatment Plant (ETP) was under stabilization.

IV. **Noise monitoring and preservation**

i. DG Set is provided with acoustic enclosure. ***(refer photograph no. 17)***

V. **Waste Management**

i. ETP Sludge is used as manure.

ii. Hazardous waste like Used Oil is sent to TSDF. The unit has TSDF member ship with Bharat oil and waste management limited. Unit has submitted the copy of form-10 for the month of May, 2024. As per the document the unit has transported 70 kg of sludge, 28.7 kg cotton rags and 40 kg empty drums to Bharat oil ltd.,

iii. As waste minimization measures, unit has installed automated filling and Hydro-jetting for cleaning of vessels.

VI. **Green Belt**

i. Details about green belt along with details of trees & shrubs are mentioned in above Para IV of specific EC conditions.

Part F: Conclusion & Recommendations

Conclusion:

1. Unit was non-operational due to non-crushing season. During survey of the surroundings of the unit and Sot river, no coloured water was visible at the time of visit.
2. The ground water sample analysis result does not indicate impact due to the industry.
3. The unit has complied with the recommendations of Joint Inspection report dated 13th January 2021. Details of the same are mentioned in Part C of the report.
4. The details of the verification of the directions of Hon'ble NGT passed vide judgement dated 01.09.2021 are mentioned in Part D of the report. Unit has complied all the points except the directions regarding interlocking of Pollution Control Devices with production processes.
5. The detailed compliance status of Environmental Clearance (EC) conditions is mentioned at Part E. The unit has not compiled with the following conditions:

iii. Not installed CAAQMS.
iv. No rainwater harvesting system was observed in the plant.

Recommendations:

- Unit shall maintain the ash disposal record with respect to disposal and distribution.
- Unit shall implement a system for interlocking of the pollution control plants / devices and the production process, as directed by Hon'ble NGT-PB.
- Unit shall comply with following EC conditions:
  - Install CAAQMS stations as per EC condition.
  - Make provision for rain water harvesting as per EC condition.

Inspection Team

S.No.	Inspecting Officials	Signature
1.	Sh. Nazimuddin, Scientist 'F', DH- IPC-II, CPCB, Delhi	
2.	Mrs Reena Satavan, Scientist 'E', CPCB, Delhi	
3.	Sh. Ashutosh Chauhan, Regional Officer- Moradabad, UPPCB,	
4.	Shri J. N Tiwari, AEE, UPPCB	

Photographs

Pic :1 Effluent treatment scheme

Pic : 2 ETP tank

Pic :3 Lagoon for storage of ETP treated effluent

Pic:4 Decanter

Pic: 5 Flow meter at the inlet of ETP

Pic: 6 Flow meter at the outlet of ETP

Pic: 7 lime dosing pump

Pic: 8 Flow meter at the inlet of STP

Pic: 9 Sewage Treatment plant

Pic: 10 STP inlet

Pic: 11 MGF and ACF units of STP

Pic: 12 Green belt area

Pic: 13 Drain outside the units premises

Pic:14 Water hyacinth at the confluence point of drain and Sot River

Pic 15: Paved area near plants

Pic 16 : Rain water accumulated in River SOT

Pic 17 : DG set

Annexure-B

Detailed site visit report of M/s Dhampur Bio Organics Ltd., Unit-Meerganj, District Bareilly (Sugar Unit) on 18.10.2024

Part A: General Information

1.	**Name of the unit with complete postal address**	M/s Dhampur Bio Organics Ltd, Unit- Meerganj, Division-Sugar, Village & Post- Meerganj, Bareilly ,(U.P) Pin Code - 243504
2.	**Spatial Co-ordinates Latitude and longitude**	Latitude: 28.549419° Longitude: 79.213158°
3.	**Year of commissioning**	1995
4.	**Category**	Sugar with power cogeneration of 22.5 MW
5.	**Co-Generation Capacity, MW**	22.5 MW
6.	**Start period of crushing season**	07th November 2023 (crushing season closed on 09.04.2024)
7.	**No. of Operational days**	136
8.	**Operational status during visit**	Non-operational (due to off-season)
9.	**Consented capacity of sugar Mill (TCD)**	9000 ton cane crushing per day (TCD)

Consent & EC status

10.	**Consent status & its Validity with date**	Consolidated Consent & Authorization (CCA) issued by UPPCB dated 19.06.2023 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 with validity upto 31.12.2024. Consolidated consent is attached at **Annexure-3A.**
11.	**Environment Clearance (EC)**	Yes, EC issued on 27th March 2023 for capacity expansion from 5000 TCD to 11000 TCD. EC is attached at **Annexure-3B.**

Source of Fresh Water

12.	**Bore well/Tube well/ Any other & its No's**	4 Numbers of borewell
	Flow meter Installation at wells (Yes/No)	Yes
13.	**NOC from CGWA/UPGWD & its Validity with date**	Unit has UPGWD NOC for groundwater abstraction from 04 no. of borewell, having validity upto 18.05.2026. As per the conditions of NOC of UPGWD, the unit can abstract groundwater at a maximum rate of 166100 KL/annum or 730 KLD (55800 from bore well -1, 55800 from borewell - 2, 18000 from borewell-3 and 36500 from borewell - 4 annually). NOC for groundwater abstraction from 03 bore wells are attached at **Annexure-3C-a, 3C-b and 3C-c.** As per the records it was observed that the unit has abstracted total 50373 kl from 04 borewells (i.e. 14250 KL

		in the month of Nov. 2023, 9232 KL in Dec, 2023, 7530 KL in Jan, 2024, 9344 KL in Feb,2024 and 10017 KL in March, 2024) against the permissible limit of 166100 KL/annum which is as per NOC.

Process Effluent Treatment Plant

14.	**Treatment ETP Capacity**	The unit has installed ETP of 2200 KLD capacity.
15.	**Operational Status**	ETP was not in operation due to non-crushing season however, was found under stabilization at the time of visit.
16.	**Treatment ETP Scheme**	Equalization Tank→ Primary Clarifier→ Aeration Tank→ Secondary Clarifiers → Filter & Activated Carbon unit → storage lagoon→ irrigation
17.	**Flowmeters installed**	The unit has installed flow meter at the inlet, outlet of ETP
18.	**Disposal/reuse of treated effluent**	For storage of treated effluent, the unit is having one brick-lined treated effluent storage lagoon of capacity 5000 m^3 from where the treated effluent from the lagoon is used in irrigation. To record the quantity of treated effluent being used for irrigation purpose, flow meter was found installed and unit maintains log-book of the same. However, due to non-crushing season on the day of visit the lagoon was found dry and empty.

Sewage Treatment Plant

19.	**Operational Status**	Operational
20.	**Treatment Capacity (KLD)**	50 KLD
21.	**Source of domestic sewage**	Staff quarters, guest houses, offices etc.
22.	**Treated Scheme**	Sump →Equalization tank →MBBR-1→MBBR-2 →Tube Settler→Chlorine contact tank→ Filtration unit and Activated Carbon unit→Treated effluent tank→irrigation
23.	**Flow meters at inlet and outlet of STP**	Installed at inlet & outlet of STP.
24.	**Condition as per the Consent issued by SPCB**	The treated effluent shall be reused to the maximum extent within the premises for gardening. Quality of the treated effluent shall meet to the general standards as prescribed under Environment (Protection) Rules, 1986.
25.	**Observation w.r.t reuse of treated water from STP outlet**	At the time of visit the entire treated effluent from STP outlet was being used in the plantation around STP area through closed pipeline. Samples were also collected from STP inlet & outlet.

Air Pollution Sources

26.	**Details of Boilers & type of fuel used**	**Boilers**	**Type of fuel**	**Steam generation Capacity (Ton Per Hour)**	**APCD installed**	**Stack No.**	**Stack height**
		Boiler-1		80	Water scrubber	1	Common stack of

		Boiler-2	Bagasse	55	Water Scrubber		height 50 mtrs

Ash Generation Details

27.	**Ash Generation**	Ash generation for the period from Nov, 2023 to March 2024 was as follows:
28.	**Ash management and Disposal**	Mixed with Press mud and use as manure.

Month	**Nov**	**Dec**	**Jan**	**Feb**	**March**
Ash generation (MT)	754.2	905.6	914.8	860.3	662.4

Part B: Verification of findings of detailed report Jan 2023

During 15th-16th Nov 2021, survey and monitoring of nearby villages around the Dhampur Bio-Organics Ltd., Meerganj unit and monitoring of Pilakhar River was carried out to assess the impact on ambient environment.
For assessment of present situation, team visited the industrial premises and surroundings. The findings of the team are mentioned below:

i. To assess the quality of ground water, the team collected ground water sample from borewell located within the unit premises. Analysis results of the sample collected are attached at **Annexure-3D** and is tabulated below**:**

Table 1: Analysis results of samples collected from Hand pump

Parameters	**Analysis Results**	**BIS standards (10500)**
pH	7.7	**6.5-8.5**
Conductivity (µmho/cm)	589	**-**
Color (colour units)	BDL	**15**
TSS (mg/l)	BDL	**-**
BOD (mg/l)	BDL	**-**
COD (mg/l)	BDL	**-**
TDS (mg/l)	386	**2000**
Total hardness as CaCO3 (mg/l)	160	**600**
Total alkalinity as CaCO3(mg/l)	255	**600**
Sulfate (mg/l)	59	**400**
As (mg/l)	BDL	**0.05**
Cd (mg/l)	BDL	**0.003**
Co (mg/l)	BDL	**-**
Cr (mg/l)	BDL	**0.05**
Cu (mg/l)	BDL	**1.5**
Fe (mg/l)	0.031	**0.3**
Mn (mg/l)	0.174	**0.3**

Ni (mg/l)	BDL	**0.02**
Pb (mg/l)	BDL	**0.01**
Sb (mg/l)	BDL	**-**
Se (mg/l)	BDL	**0.01**
V (mg/l)	BDL	**-**
Zn (mg/l)	0.033	**15**

Analysis results of the samples collected from the ground indicates no industrial impact.

ii. The unit was non-operational and no discharge was observed from the industrial premises.

Part C: Verification of the recommendations of the joint inspection report dated 26-03-2021

<table>
<tr><th>S.No.</th><th>Recommendations in Joint inspection report dated 26-03-2021</th><th>Verification by joint team as on date 18.10.2024</th></tr>
<tr><td>1.</td><td>ETP inlet flowmeter should be installed at the main inlet of ETP.</td><td>The unit has installed flowmeter at the inlet of ETP. (refer photograph no. 1)</td></tr>
<tr><td>2.</td><td>Periodic removal of sludge shall be ensured</td><td>On the day of the visit, the plant was found non-operational due to season off. No stored sludge was observed in the unit premises.
The team collected log book of ETP sludge for the period from Nov, 2024 to March 2024. The details are as follows;
<table>
<tr><th>Month</th><th>Sludge generation (kg)</th></tr>
<tr><td>Nov, 2023</td><td>7374</td></tr>
<tr><td>Dec, 2023</td><td>18868</td></tr>
<tr><td>Jan, 2024</td><td>18475</td></tr>
<tr><td>Feb, 2024</td><td>17369</td></tr>
<tr><td>March, 2024</td><td>18073</td></tr>
</table>
The logbook data indicates that’s the unit removes its ETP sludge periodically.</td></tr>
<tr><td>3.</td><td>Flow meter shall be installed at mill house for monitoring of generated effluent.</td><td>The unit has installed flow meter at the mill house. (refer photograph no. 2)</td></tr>
<tr><td>4.</td><td>The oil skimmer shall be installed in the ETP within a tank having approximately retention time of 45 min.</td><td>The unit has installed an oil & grease trap in the ETP, however due to non-operational of the plant the working of oil skimmer could not be verified. (refer photograph no. 3 & 4)</td></tr>
</table>

<table>
<tr><td>5.</td><td>The treated effluent discharges for irrigation shall comply with MoEF & CC notification dated 14.01.2016 for land disposal</td><td>The plant was non-operational due to which the sampling could not be done.</td></tr>
<tr><td>6.</td><td>The unit shall install STP for treatment of generated sewage. Treated sewage shall be utilized for irrigation & other purposes.</td><td>• The unit has installed one sewage treatment plant (STP) of capacity 50 KLD for treatment of domestic effluent generated from the staff quarters, worker's colony, guest house, offices etc.
• The STP consist of the following;
Holding tank →Oil & Grease Trap→Equalization tank →MBBR-1→MBBR-2 →Tube Settler→Chlorine Contact tank→Multi grade Filter and Activated Carbon Filter→treated effluent tank→irrigation
• On the day of the visit, Sewage Treatment Plant (STP) was found operational. Samples were collected from the inlet and final outlet of STP.
• Flow meters were found installed at the inlet & outlet of STP.
• Unit has maintained logbook of STP operations. Logbooks of STP inlet and outlet were collected for the month of September 2024 and the details are as follows;
<table>
<tr><th>Month</th><th>No of days</th><th>STP Inlet (kl)</th><th>STP Outlet (kl)</th></tr>
<tr><td>Sept. 2024</td><td>30</td><td>613</td><td>515</td></tr>
</table>
Average flow: at inlet – 20.43 KLD; outlet: 17.16 KLD
The logbook indicates that about 515 KL sewage was treated in STP in September 2024.</td></tr>
<tr><td></td><td colspan="2">Table 2: Characteristics of samples collected from STP
<table>
<tr><th>Sr. No.</th><th>Location</th><th>pH</th><th>colour</th><th>COD (mg/l)</th><th>BOD (mg/l)</th><th>TSS</th><th>TDS</th><th>NH2 -N</th><th>NO_3-N (mg/l)</th></tr>
<tr><td>1.</td><td>STP Inlet</td><td>7.2</td><td>BDL</td><td>55</td><td>16</td><td>11</td><td>248</td><td>0.22</td><td>2.62</td></tr>
<tr><td>2.</td><td>STP Outlet</td><td>8.2</td><td>BDL</td><td>39</td><td>12</td><td>BDL</td><td>368</td><td>0.52</td><td>1.75</td></tr>
<tr><td colspan="2">Standards mentioned in CCA issued by UPPCB on 19.09.2022</td><td>5.5 – 9.0</td><td></td><td>-</td><td>30</td><td></td><td></td><td></td><td></td></tr>
</table>
STP was found complying w.r.t. the standards prescribed in the Consent</td></tr>
</table>

7.	The unit shall keep only single arrangement to pump the treated effluent from the irrigation & other purposes.	The unit has dismantled the pumping arrangement available after secondary clarifier from where the treated effluent was pumped for irrigation. Now only single arrangement to pump the treated effluent for irrigation is available at storage lagoon. ***(Refer photograph no. 5)***

Part D: Verification of the recommendations of Hon'ble NGT Judgement dated 01.09.2021.

S.No.	**Recommendations of Hon'ble NGT Judgement dated 01.09.2021**	**Complying status as on 18-10-2024**
1.	All the Units must ensure continuous running of ETPs even during the non-crushing season for the adequate maintenance of required bio-mass so that the ETP is able to take the load/shock when it receives the pollution load/effluent at the start of the crushing season.	At the time of visit, the unit was non-operational due to off-season. Team observed that the ETP was under stabilization and aeration was being done to maintain active bio mass to enable smooth ETP operations in the crushing season. For the maintenance of adequate bio-mass aeration tank was found operational. Sample was collected from the aeration tank and the analysis results are as follows: MLSS = 1625mg/l MLVSS =1159mg/l Analysis results showed MLVSS/MLSS ratio as 0.71 which indicates that unit is in process of developing active biomass for stabilizing ETP prior to commencement of crushing season.
2.	All the Units in question must provide for separate Energy Meter for entire ETP setup including its accessory units with data logging facility which shall be inspected by UPPCB and CPCB from time to time.	The unit has installed separate energy meter for the ETP. The unit has maintained log book for the same. The team has collected log book of energy meter for the month of April 2024 and the details are as follows; **Month** / **Consumption(KWH)** Nov, 2023 / 77648 Dec, 2023 / 98400 Jan, 2024 / 111496 Feb, 2024 / 111584 March, 2024 / 114160 From the data it was observed that the energy consumption has been steadily increasing over the past five months. From **77,648 KWh in November 2023**, it rose to **114,160 KWh**

		in March 2024. This represents a consistent upward trend, indicating that the plant has been using more energy each month.
3.	UPPCB must ensure Interlocking of Pollution Control Devices with production processes (one way but not vice versa) so as to ensure that whenever ETPs/PCDs are intentionally closed, the production also comes to halt.	UPPCB directed the unit to comply this direction of Hon'ble NGT. The unit represented in this regard that sugar production is a continuous process and if the production process is stopped suddenly the sugarcane juice and juice concentrates in the process will clog and it will be very difficult to clean the plant and resume production.
4.	Regular inspections should be carried out by the statutory authorities in both halves of the crushing season and also at least once in non-crushing season.	During crushing season 2023-24, sampling was carried out six times i.e. on 19-01-2024, 29-01-2024, 07-02-2024, 14-02-2024, 24-02-2024, 06-03-2024 by UPPCB. Unit was found complying standards during all these inspections. Analysis reports are attached at **Annexure 3E-a, 3E-b, 3E-c, 3E-d, 3E-e & 3E-f.** Also, third party technical institutes authorised by CPCB carried out annual inspection on 17-01-2022 & 15-02-2023 and unit was found complying standards during both inspections. The reports are attached at **Annexure 3E-g & 3E-h.**

Part E: Verification of specific conditions of Environmental Clearance (EC):

The Unit has obtained Environment Clearance (EC) dated 27.03.2023 from Ministry of Environment, Forest & Climate Change (MoEF&CC) for expansion of existing sugar unit from 5000 TCD to 11000 TCD without change in existing co gen power capacity 43.5 MW within existing industry premises. During visit on 18.10.2024 team verified the compliance of the major EC conditions.

The status of the EC conditions is mentioned below;

1. Compliance status of specific conditions:

I. Notification dated 14.01.2016 of MoEF&CC regarding discharge of treated effluent shall be complied with.

Status as verified by team:

iii. The unit has installed effluent treatment plant of capacity 2200KLD having treatment scheme up to tertiary treatment level. The scheme is as follows:

Equalization Tank→Primary Clarifier→ Aeration Tank→Secondary Clarifiers → Filter & Activated Carbon unit →storage lagoon→irrigation

However, ETP was found under stabilization at the time of visit due to off-season. Therefore, sampling was done only from aeration tank and quality & quantity of discharge can't be verified. Analysis of sample collected from the aeration tank indicate MLSS: 1625mg/l and MLVSS: 1159mg/l.

iv. The unit has installed **Sewage Treatment Plant (STP)** of 50KLD to treat domestic sewage, which was found operational on the day of visit. As per the analysis results the STP was found complying w.r.t. standards prescribed in the Consent. The details are already mentioned at Point 6 of above Part C.

II. Ash generated will be stored in dedicated areas with proper fencing.

Status as verified by team:

As informed by the unit representative the ash is mixed with Press mud in 1:2 ratio and given to local farmers free of cost to be used as manure. However, at the time of visit, as the unit was non-operational therefore, no fly ash was observed by the team within the premises

III. The project proponent will install 3 Continuous Ambient Air Quality Monitoring Station (CAAQMS) in consultation with UPPCB.

Status as verified by team:

No CAAQMS has not been installed by the PP

***IV*. Three tier green belt shall be developed with native species all along the periphery of the project. Site survival rate of green belt developed shall be monitored on periodic basis to ensure that damaged plants are replaced with new plants in the subsequent years (Miyawaki method to be adopted for plantation)**

Status as verified by team:

- A three-tier green belt is a plantation with three layers of trees, shrubs, and grasses, designed to help control pollution and improve the environment. It was observed that the unit has developed lawns in front of guest house followed by shrubs and trees.
- Out of total plant area of 55.8466 hectare, green belt has been developed on 14.16-hectare area i.e 25.35 % of which 8.62 ha is green area and 5.54 ha is landscape area.
- During visit team observed that green belt is majorly developed near ETP & STP area, guest house and colony. Dense plantation was observed near ETP area. Also, trees of Shisham, Neem, Mango, Arjun, Jamun, etc. were observed along the roadside & industry periphery. Green patches were also developed in

between the plant area. As per the details provided by the unit, the details of existing trees/shrubs at project site is as follows

- The unit has developed green belt inside the unit premises, near ETP area, near guest house, and sugar cane farm was also observed within the premises. The details of plantation are as follows;

Sl. No.	Location	No. of Plants	Species Details	Year of Plantation
1	Near Godown Area	5000	Jamun, sahjan, Amrud, Bottle Brush, Kanji, Sisam, Shirish, Kadam, Arjun, kachnar neem.	2024
2	Near STP Area	5000	Jamun, Sahjan, Amrud, Anaar, kanji etc.	2023
3	Near Plant gate	1800	Neem, Mango, Mahogany, Jamun, Kachnar, Champa, Semal etc.	2022
Total		**11800**		

V. **Performance test shall be conducted on all pollution control system every year and report shall be submitted to regional office of the MoEF and CC.**

Status as verified by team:

Unit conducted analysis of ETP (inlet & outlet) samples and stack monitoring through third party (NABL accredited) laboratory and submitted the reports along with 6 Monthly Compliance Report to MoEF&CC. As per reports last ETP monitoring was carried out on 15.04.2024 & stack monitoring was conducted on 29.02.2024.

ETP inlet sample results indicate pH- 6.9, BOD- 188 mg/l, COD- 1692 mg/l, TSS-228 mg/l, TDS- 1286 mg/l and Oil & Grease-14.6 mg/l whereas ETP outlet sample results indicate pH- 7.3, BOD- 15 mg/l, COD- 120 mg/l, TSS-16.8 mg/l, TDS- 824 mg/l and Oil & Grease-BDL. ETP results indicate compliance w.r.t notified discharge norms.

Ambient air quality monitoring was conducted on 29.02.2024 near main gate, Village Nagaria Sadat, Village Jatan and village Sindhauli are as follows

Location	**PM 10 (µg/m³)**	**PM 2.5 (µg/m³)**	**SO_2 (µg/m³)**	**NOx (µg/m³)**
Near main gate	81.2	51.54	14.23	20.86
Village Nagaria Sadat	78.5	49.08	12.43	17.69
Village Jatan	75.4	46.93	12.31	18.05
Village Sindhauli	76.4	48.65	12.43	17.82
Standard	**100**	**60**	**80**	**80**

Ambient air quality monitoring results indicate compliance w.r.t notified standards.

Monitoring results of common stack attached to 80 Ton Per Hour (TPH) & 55 Ton Per Hour (TPH) boilers indicate PM: 75.8 mg/Nm^3, SO2: 5.9 mg/Nm^3 and NOx- 26 mg/Nm^3.

The unit has carried out adequacy assessment of ETP by NSI during 17-18 Jan 2024. As per adequacy report, the capacities of existing ETP equipment's are adequate on licensed crush rate of 9000 TCD @ effluent flow rate 183.27/ 200 litres/ ton of cane.

VI. **Greening and paving shall be implemented in the plant area to arrest soil erosion and dust pollution due to exposed soil surface.**

Status as verified by team:

In plant area team observed patches of greenery and tiled paved surface***.***

(refer pic no. 9)

VII. Properly covered vehicles shall be used while transporting material and product.

Status as verified by team:

At the time of visit no transportation of material and product was taking place as
the unit was non-operational.

VIII. Allergy test should also be included in health check-up of works.

Status as verified by team:

Health check-up of all the employees for identification of occupational health hazard on bi-annual basis is being conducted by the unit where blood tests, eye check-up, telemetry test, respiratory system check-up were done by panel of MBBS doctors. Sample report of an employee is attached as **Annexure 3F** for reference. Also, unit organised free eye-check up camp for nearby villagers.
Annual Health check-up is conducted by Unit & health reports are submitted to concern authorities. The unit organised a free eye and health check-up camp on 13-01-2024.

IX. Industry should comply with the CPCB charter guidelines for sugar units and treated effluent shall be used for the different purposes as per the **requirements in the industry**

Status as verified by team:

ii. The compliance status of salient points of Sugar Charter are as following:
   a) The unit has tertiary level effluent treatment plant of 2200KLD capacity.

b) Installed electromagnetic flow meters at ETP inlet, outlet and all three borewells.
c) Maintained daily records of fresh water consumption, effluent discharge, regular analysis of ETP effluent parameters, energy consumption, & STP operations etc.
d) Developed environmental laboratory for the analysis of DO, pH, BOD, COD, TSS & TDS and MLSS parameters of ETP inlet and outlet.
e) Developed Environmental Management Cell (EMC)
f) Prepared Irrigation Management Plan from NSI, Kanpur for 137.80-hectare command area. Have lagoon of capacity 16000m^3 capacity for storage of the treated effluent to be used for irrigation purpose.
g) As per adequacy assessment of ETP carried out by NSI during 17-18 Jan 2024, the capacities of existing ETP equipment's are adequate on licensed crush rate of 9000 TCD @ effluent flow rate 183.27/ 200 litres/ ton of cane.
h) Installed Online effluent & emission (OCEMS) monitoring system at ETP outlet & boiler stack respectively and provided its connectivity to CPCB and SPCB servers

2. Compliance status of major standard conditions:

II. **Statutory Compliance**:

iii. The unit has obtained Consolidated Consent & Authorization issued by UPPCB dated 04.09.2023 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 Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 with a validity upto 31.12.2024.
iv. The unit has obtained UPGWD NOC for groundwater abstraction from 04 no. of borewell, having validity upto 18.05.2026. As per the conditions of NOC of UPGWD, the unit can abstract groundwater at a maximum rate of 166100 KL/annum (55800 from bore well -1, 55800 from borewell -2, 18000 from borewell-3 and 36500 from borewell - 4 annually).

II. **Air Quality Monitoring & Preservation:**

i. Online Continuous Effluent Monitoring System (OCEMS) is installed in all the Boiler Stacks & it is connected to CPCB & UPPCB Server.
ii. Unit carries out Ambient Air Quality (AAQ) monitoring at four designated locations. The last monitoring was carried out on 29.02.2024 by NABL accredited & EPA recognised laboratory. The analysis results are mentioned at point V of EC conditions.
iii. Installed Wet Scrubber on the common stack of the 80 Ton Per Hour (TPH) and 55 Ton Per Hour (TPH) boilers.
iv. The unit doesn't use any coal rather it exclusively uses bagasse as fuel in all the two Boilers of capacity 80 Ton Per Hour (TPH) & 55 Ton Per Hour (TPH)H. These boilers are equipped with common stack, of 50 meters' height.

v. The unit is having 02 nos. of DG sets of capacity 625 KVA each kept inside acoustic room.

III. **Water quality monitoring and preservation**

i. Flow meters were found installed at the inlet and outlet of ETP and same are connected to CPCB & UPPCB Server.
ii. Separate storm water drain was observed within the premises.
iii. As the unit was non-operational hence, the compliance of ETP with discharge norms couldn't be verified.
iv. Unit has obtained UPGWD NOC for groundwater abstraction from 04 no. of borewell, having validity upto 18.05.2026. As per the records it was observed that the unit has abstracted an average of 360 KLD of fresh water from 04 borewells during Nov, 2023 to March 2024 which is within the permissible limit of 420 KL/day groundwater abstraction mentioned in the No Objection Certificate (NOC) issued by UPGWD.
v. The unit has Effluent Treatment Plant (ETP) of capacity 2200 KLD. During visit the unit was found non-operational due to season off, however the Effluent Treatment Plant (ETP) was under stabilization.

IV. **Noise monitoring and preservation**

i. The unit is having 02 nos. of DG sets of capacity 625 KVA each kept inside acoustic room. ***(refer photograph no.7)***

V. **Waste Management**

i. ETP Sludge is used as manure.
ii. Unit has an agreement for Disposal of Hazardous Waste to TSDF M/s Bharat Oil and Hazardous waste like Used Oil are sent to TSDF.
iii. As waste minimization measures, unit has installed automated filling and Hydro-jetting for cleaning of vessels.

VI. **Green Belt**

i. Details about green belt along with details of trees & shrubs are mentioned in above Para IV of specific EC conditions.

Part F: Conclusion and Recommendations

Conclusion:

1. The unit was non-operational and no discharge was observed from the Industrial Premises.
2. The ground water sample analysis result does not indicate impact due to the industry.

3. The unit has complied with the recommendations of Joint Inspection report dated 14th January 2021. Details of the same are mentioned in Part C of the report.
4. The details of the verification of the directions of Hon'ble NGT passed vide judgement dated 01.09.2021 are mentioned in Part D of the report. Unit has complied all the points except the directions regarding interlocking of Pollution Control Devices with production processes.
5. The detailed compliance status of Environmental Clearance (EC) conditions is mentioned at Part E. The unit has not compiled with the following conditions:
    i. CAAQMS not installed.
    ii. Rainwater harvesting system was not observed in the plant.

Recommendations:

- The unit shall maintain the ash disposal record with respect to disposal and distribution.
- Unit shall implement a system of interlocking of the pollution control plants / devices and the production process, as directed by Hon'ble NGT-PB.
- Unit shall comply with following EC conditions:
    - Install CAAQMS stations as per EC condition.
    - Make provision for rain water harvesting as per EC condition.

Inspection Team

S.No.	Inspecting Officials	Signature
1.	Sh. Nazimuddin, Scientist 'F', DH- IPC-II, CPCB, Delhi	
2.	Mrs Reena Satavan, Scientist 'E', CPCB, Delhi	
3.	Sh. Chandresh Kumar, Regional Officer, UPPCB, Regional Office- Bareilly	
4.	Sh. S.S Chauhan, ASO, Regional Office- Bareilly	

Photographs

Pic 1: Flow meter at the inlet of ETP	**Pic 2: Flow meter at the mill boiling house**
Pic 3 : Oil and Grease tank	**Pic 4 : Oil and Grease tank**
Pic 5: Dismantled the pumping arrangement	**Pic 6: Sewage Treatment Plant**

Pic: 7 D.G Acoustic room

Pic 8: Green belt within the premises

Pic 9 : Paved surface near plantation

Annexure-C

Detailed site visit report of M/s Dhampur Sugar Mills Limited, Village Alhaipur, Tehsil Dhampur, District Bijnor (Sugar Unit) on 16.10.2024

Part A: General Information

1.	**Name of the unit with complete postal address**	M/s Dhampur Sugar Mills Limited, Village Alhaipur, Tehsil Dhampur, District Bijnor (Uttar Pradesh) Pin Code- 246761
2.	**Spatial Co-ordinates Latitude and longitude**	Latitude: 29.290506 Longitude: 78.514081
3.	**Year of commissioning**	1933
4.	**Sugar with Distillery (Yes/No)**	Yes
5.	**Category**	Sugar refinery with power cogeneration of 60 MW
6.	**Co-Generation Capacity, MW**	60 MW
7.	**Start period of crushing season**	30.10.2023 (Crushing season closed on 06.04.2024)
8.	**No. of Operational days at the time of inspection**	167
9.	**Operational status during visit**	Non-operational (due to off-season)
10.	**Consented capacity of sugar Mill (TCD)**	14000 ton cane crushing per day (TCD)

Consent Section

11.	**Consent status & its Validity with date**	Consent under section 25/26 of The Water (Prevention and control of Pollution) Act, 1974 issued on 27.03.2020, valid upto 31.12.2024. Copy of same is attached at **Annexure-4A.** Consent under Section-21 of the Air (Prevention & Control of Pollution) Act, 1981 issued on 31.12.2021, valid upto 31.12.2026. Copy of same is attached at **Annexure-4B.** Authorization under the provisions of Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 issued on 28.12.2020, valid upto 28.12.2025. Copy of same is attached at **Annexure-4C.**
12.	**Environmental Clearance (EC)**	Environment Impact Assessment (EIA) notification regarding prior Environmental Clearance (EC) notified in 2006 includes Sugar Industry in the schedule. The unit was originally commissioned in 1933 and it was informed by the Unit and UPPCB that no expansion in production capacity has been done after EIA notification hence EC has not been obtained from MoEF&CC

Source of Fresh Water		
13.	**Bore well/Tube well/ Any other & its No's**	4 Numbers of borewell
	Flow meter Installation at wells (Yes/No)	Yes
14.	**NOC from CGWA /UPGWD & its Validity with date**	Unit has UPGWD NOC for groundwater abstraction from 04 no.s of borewell, having validity upto 27.04.2027 (3 borewels) and 07.05.2027 (1 borewell). Copy of NOC for groundwater abstraction are attached at **Annexure-4D-a, 4D-b, 4D-c.** As per the conditions of NOC from UPGWD, the unit can abstract groundwater at a maximum rate of 346000 KL/annum or 947.94 KLD (Borewell 1- 126000 KL, Borewell 2- 84000 KL, Borewell 3- 73000 KL, Borewell 4- 63000 KL annually) As per the records it was observed that the unit has abstracted total 140833 kl from 04 borewells for last crushing season (Nov 2023-April 2024) (i.e. 24549 KL in the month of Nov. 2023, 25237 KL in Dec, 2023, 26610 KL in Jan, 2024, 24380 KL in Feb,2024, 25317 KL in March, 2024 and 14740 KL in April 2024) or 791.19 KL/day against the permissible limit of 947.94 KL/day which is as per NOC

Process Effluent Treatment Plant		
15	**Treatment ETP Capacity**	The unit has installed ETP of 4500 KLD capacity.
16	**Operational Status**	ETP was not in operation due to non-crushing season however, ETP was found under stabilization at the time of visit.
17	**Treatment ETP Scheme**	Oil skimmer→ Screen→ Equalization Tank→ pH Correction Tank → Primary Clarifier→ Aeration Tank → Secondary Clarifier → Treated effluent Collection pit → Dual media filter → Activated Carbon Filter→ Lagoon → For irrigation Spray pond overflow → Chemical dosing → Reaction Tank → Primary Clarifier → Aeration tank → Secondary Clarifier → Treated effluent collection pit
18	**Flowmeters installed**	The unit has installed flow meter at the inlet and outlet of ETP
19	**Disposal/reuse of treated effluent**	For storage of treated effluent, the unit is having one brick-lined treated effluent storage lagoon of 10,000 m^3 capacity, from where the treated water is used in irrigation. To record the quantity of treated effluent being used for irrigation purpose, flow meter was found installed and unit maintains log-book of the same. However, due to non-crushing season on the day of visit the lagoon was found dry and empty.

Process Condensate Polishing Plant (CPU)		
20	**Treated capacity of Condensate polishing system adopted by the unit**	Unit has installed CPU of 72 m^3/hr capacity to treat the process condensate.
21	**Treated scheme of the CPU**	Process condensate → Multi Grade Filter → Activated Carbon Filter → Micron Cartridage → Micron bag filter → High pressure pump → RO membrane system
22	**Use of treated Condensate**	Treated condensate from CPU is used for make-up of Co-Gen Cooling Tower.

Sewage Treatment Plant

23	**Operational Status**	Operational
24	**Treatment Capacity (KLD)**	220 KLD (common for Sugar & Distillery)
25	**Source of domestic sewage**	Staff quarters, guest houses, offices etc.
26	**Treated Scheme**	Sewage collection tank → MBBR I → MBBR II → Tube Settler → Storage Tank → Multi Grade filter → Activated Carbon Filter → Outlet
27	**Flow meters at inlet and outlet of STP**	Installed at inlet & outlet of STP
28	**Condition as per the Consent issued by SPCB**	Domestic effluent shall be treated in the treatment plant so that it should be in conformity with the norms of treated effluent as stipulated in E.P. Rules 1986 as amended. TSS – 100 mg/l BOD-30 mg/l Oil & Grease – 10 mg/l COD – 250 mg/l Quantity of discharge – 50 KLD
29	**Observations w.r.t reuse of treated water from STP outlet**	At the time of visit the entire treated effluent from STP outlet was being used in the plantation through flexible pipeline. Samples were also collected from STP inlet & outlet.

Detail of Air Pollution Control System

30	**Details of Boilers, type of fuel used,**	**No. of Boilers**	**Type of fuel**	**Steam generation capacity (Ton Per Hour)**	**APCD installed**	**Stack No.**	**Stack height**
		Boiler-1	Bagasse	170	ESP	1	Common stack of height 90 meter
		Boiler-2	Bagasse	170	ESP		
31	**Online emission (OCEMS) monitoring system installed**	Installed and connected with CPCB and SPCB server for Particulate Matter (PM)					

Ash Generation Details

32	**Ash Generation**	Ash generation for the period from Oct, 2023 to April 2024 was as follows:

Month	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**March**	**April**
Ash generation (MT)	75	2786.2	3348.5	3405.4	3004.7	2683.1	481.1

33	**Ash management and Disposal**	Mixed with press mud and being sold to farmers as bio manure

Part B: Verification of detailed report Jan 2023

During 01-02 Dec 2021, the nearby area around the Dhampur Sugar Mills Ltd and Ikra drain was visited to assess the impact on environment. For assessment of present situation, team visited the industrial premises and surroundings. The findings of the team are mentioned below:

Survey of Surrounding

During visit on 16-10-2024, team surveyed the stretch of Ikra drain from upstream of unit (near the boundary wall of unit) till bio-compost yard (approx. 3-4 kms) (Lat: 29.28781, Long:78.50618). The team observations vis-a-vis observations as per visit 01-02 Dec, 2021 are tabulated below:

Table 1: Observations on Ikra drain on 16-10-2024 vis-à-vis 01-02 Dec 2021

S.No	**Location**	**Observations as per visit 01-02 Dec, 2021**	**Observations as per visit 16 Oct 2024**
1.	Ikra drain u/s Dhampur Sugar mill (Lat: 29.29198, Long: 78.51010)	- The analysis results of sample showed pH-7.1, BOD-54 mg/l, COD-135 mg/l, TDS-292 mg/l, NH3-N-34 mg/l, Sulphate-136 mg/l. The results indicated that water in Ikra drain is polluted as it carries sewage from Dhampur city.	The drain sample was collected from the same location and analysis results are as: pH-7.7, BOD-68 mg/l, COD-152 mg/l, TDS-380 mg/l, NH3-N- 28 mg/l, Sulphate- 31 mg/l. Analysis results are attached at **Annexure-4E.** Ikra drain carries sewage from Dhampur City.
2.	Ikra drain near Compost yard of Dhampur Sugar mill (Lat: 29.28781, Long:78.50618)	The analysis results of sample showed pH-7, BOD-123 mg/l, COD-391 mg/l, TDS-244 mg/l, NH3-N-12 mg/l, Sulphate-60 mg/l. The results	The drain sample was collected from the same location and analysis results showed pH-7.6, BOD-86 mg/l, COD-158 mg/l, TDS-370 mg/l, NH3-N-31 mg/l, Sulphate- 36 mg/l. Analysis results are attached at

		indicated more pollution load at this location in comparison to upstream location.	**Annexure-4E.** Ikra drain carries sewage from Dhampur City. Unit was non-operational due to non-crushing season.

Groundwater assessment

i. To assess the quality of ground water, the team collected ground water sample from borewell located within the unit premises. Analysis results of the sample are attached at **Annexure- 4E** is tabulated below:

Table 2: Analysis results of samples collected from Hand pump

Parameters	**Bore-well**	**BIS IS 10500:2012 (Permissible limit in absence of alternative source)**
pH	7.6	**6.5-8.5**
Conductivity (µmho/cm)	882	**-**
Color (Hazen)	BDL	**15**
COD (mg/l)	2	-
TSS (mg/l)	BDL	-
TDS (mg/l)	462	**2000**
Total hardness as $CaCO_3$ (mg/l)	301	**600**
Total alkalinity as $CaCO_3$ (mg/l)	316	**600**
Chloride (mg/l)	53	**1000**
Sulfate (mg/l)	85	**400**
Fluoride (mg/l)	0.34	**1.5**
NO_3-N (mg/l)	BDL	**45**
PO4-P (mg/l)	0.09	**-**

Analysis results of the samples collected from the ground indicates no industrial impact.

Part C: Verification of the recommendations of the joint inspection report dated 23.03.2021

S.No.	**Recommendations by Joint inspection report dated 26-03-2021**	**Verification by joint team as on dated 16.10.2024**
1.	The unit shall take measures to stop discharge of spillage/ surface runoff containing waste water from industrial premises into drain (Ikra drain and drain coming from city along boundaries of sugar unit)	Unit was found non-operational due to non-crushing season. However, samples from Ikra drain were collected during visit. Details are tabulated in Table 1.

	and shall maintain water quality of the drain.	
2.	The unit shall install CPU for high pressure boiler at earliest.	It was observed that unit has installed CPU of 72 m3/hour capacity. CPU details are mentioned in above Part A (point no 20-22) ***(refer photograph no. 8)***
3.	The unit shall install Sewage Treatment Plant (STP) for sewage generated from colony at the earliest.	The unit has installed sewage treatment plant (STP) of capacity 220 KLD for treatment of domestic effluent generated from the staff quarters, worker's colony, guest houses etc. Since Sugar and distillery units are located within same premises, therefore unit has installed common STP. The STP consist of the following scheme ***Sewage collection tank → MBBR I → MBBR II → Tube Settler → Storage Tank → Multi Grade filter → Activated Carbon Filter → Outlet*** STP treated effluent is used for gardening purpose. • On the day of the visit, Sewage Treatment Plant (STP) was found operational. Samples were collected from the inlet and final outlet of STP. • Flow meters were found installed at the inlet & outlet of STP. o Reading of STP inlet flowmeter: Instantaneous- 4.47m^3/hr; Totalizer- 113670 m^3 o Reading of STP outlet flowmeter: Instantaneous- 2.775m^3/hr; Totalizer- 70394 m^3 • Unit has maintained logbook of STP operations. Logbooks of STP inlet and outlet were collected for the month of September 2024 and the details are as follows;

<table>
<tr><td></td><td></td><td>
<table>
<tr><th>Month</th><th>No of days</th><th>STP Inlet (KL)</th><th>STP Outlet (KL)</th></tr>
<tr><td>Sept. 2024</td><td>30</td><td>2620</td><td>2521</td></tr>
</table>
Average flow: Inlet-87.3KLD & Outlet- 84.03KLD
</td></tr>
<tr><td></td><td colspan="2">
Table 3: Analysis results of samples collected from STP
<table>
<tr><th>Sr. No.</th><th>Location</th><th>pH</th><th>COD (mg/l)</th><th>BOD (mg/l)</th><th>TSS</th><th>TDS</th><th>Color</th><th>NO2-N</th><th>NO3-N (mg/l)</th></tr>
<tr><td>1.</td><td>STP Inlet</td><td>7.4</td><td>57</td><td>6</td><td>11</td><td>400</td><td>BDL</td><td>0.01</td><td>BDL</td></tr>
<tr><td>2.</td><td>STP Outlet</td><td>8.3</td><td>18</td><td>3</td><td>BDL</td><td>376</td><td>BDL</td><td>0.37</td><td>BDL</td></tr>
<tr><td colspan="2">Standards mentioned in CCA issued by UPPCB on 19.09.2022</td><td>-</td><td>250</td><td>30</td><td>100</td><td>-</td><td>-</td><td>-</td><td>-</td></tr>
</table>
STP was found complying w.r.t. the standards prescribed in the Consent.
</td></tr>
<tr><td>4.</td><td>The unit shall convert 4000 m^3 capacity lagoon into lined impermeable lagoon to avoid any possibility of leakages and must ensure the compliance of stored treated effluent w.r.t notified discharge standards under E(P) Rules, 1986.</td><td>It was observed that 4000 m^3 capacity lagoon near agricultural fields of the unit has not been reclaimed /filled completely by unit and it was partially filled with mud and rainwater. It was used in the past for treated effluent storage and HDPE lining still exists. During visit, grass and shrubs were observed to be grown in the lagoon. (Refer photograph no 2)</td></tr>
<tr><td>5.</td><td>The unit shall dismantle the sump having capacity of 100 KL located in bio compost yard 10 acres.</td><td>The unit has dismantled the 100 KL sump in bio-compost yard. (Refer photograph no 15)</td></tr>
<tr><td>6.</td><td>Unnecessary lines for ETP feed near falling structure shall be dismantled immediately.</td><td>The unit explained that there are no unnecessary pipe lines in ETP area. The unit was instructed to use different colour coding for effluent pipe lines.</td></tr>
<tr><td>7.</td><td>Abandoned old pumping station alongwith connected line shall be dismantled.</td><td>Old pumping station along with connected line was found to be dismantled. It was observed that unit has constructed new pumping station for feeding raw effluent to ETP. (Refer photograph no 11 & 12)</td></tr>
<tr><td>8.</td><td>Filter backwashing tank of suitable design capacity shall be installed for filter backwashing.</td><td>The suggestion to enhance capacity of water tank for filter backwashing has not been implemented.</td></tr>
</table>

	Existing fresh water line in ETP area shall be dismantled.	Freshwater line in ETP was disconnected during visit. ***(Refer photograph no 13)***
9.	Provision shall be made for DM plant cleaning in process (CIP) reject shall be treated in ETP only.	Unit informed that the DM plant CIP reject is treated in the ETP when unit is operated. Compliance need to be verified by SPCB when unit resumes operation

Part D: Verification of the recommendations of NGT Judgement dated 01.09.2021.

S.No.	**Recommendations of NGT Judgement dated 01.09.2021.**	**Compliance status as on 16-10-2024**
1.	All the Units must ensure continuous running of ETPs even during the non-crushing season for the adequate maintenance of required bio-mass so that the ETP is able to take the load/shock when it receives the pollution load/effluent at the start of the crushing season.	At the time of visit, the unit was non-operational due to off-season. Team observed that the ETP was under stabilization and aeration was being done to maintain active bio mass to enable smooth ETP operations in the crushing season. For the maintenance of adequate bio-mass aeration tank was found operational. Unit has two aeration tanks and samples were collected from both tanks. Analysis results are as follows: Aeration tank 1: MLSS = 737 mg/l MLVSS =463 mg/l Aeration tank 2: MLSS = 812 mg/l MLVSS =590 mg/l Analysis results showed MLVSS/MLSS ratio as 0.62 and 0.72 for both tanks which indicates that unit is in process of developing active biomass for stabilizing ETP prior to commencement of crushing season.

<table>
<tr><td>2.</td><td>All the Units in question must provide for separate Energy Meter for entire ETP setup including its accessory units with data logging facility which shall be inspected by UPPCB and CPCB from time to time.</td><td>The unit has installed separate energy meter for the ETP. The unit has maintained log book for the same. The team has collected log book of energy meter for the last crushing season from Nov 2023-March 2024 and the details are as follows:
<table><tr><th>Month</th><th>Consumption(KWH)</th></tr><tr><td>Nov, 2023</td><td>22204</td></tr><tr><td>Dec, 2023</td><td>34048</td></tr><tr><td>Jan, 2024</td><td>35601</td></tr><tr><td>Feb, 2024</td><td>31213</td></tr><tr><td>March, 2024</td><td>32975</td></tr></table></td></tr>
<tr><td>3.</td><td>UPPCB must ensure Interlocking of Pollution Control Devices with production processes (one way but not vice versa) so as to ensure that whenever ETPs/PCDs are intentionally closed, the production also comes to halt.</td><td>UPPCB directed the unit to comply this direction of Hon’ble NGT. The unit represented in this regard that sugar production is a continuous process and if the production process is stopped suddenly the sugarcane juice and juice concentrates in the process will clog and it will be very difficult to clean the plant and resume production.</td></tr>
<tr><td>4.</td><td>Regular inspections should be carried out by the statutory authorities in both halves of the crushing season and also at least once in non-crushing season.</td><td>During crushing season 2022-23 & 2023-24, sampling was carried out six times i.e. on 05-04-2023, 30-05-2023, 22-11-2023, 12-12-2023, 06-04-2024, 10-10-2024 by UPPCB. Unit was found complying standards during all these inspections. Analysis reports are attached at Annexure 4F-a, 4F-b, 4F-c, 4F-d, 4F-e & 4F-f.

Also, third party technical institutes authorised by CPCB carried out annual inspection on 12-01-2022 & 14-02-2023. Unit was found not complying standards during inspection on 12-01-2022 and unit was issued show-cause notice by UPPCB on 22-02-2022 which was later withdrawn as unit was found complying standards in subsequent inspection. The reports are attached at Annexure 4F-g & 4F-h.</td></tr>
</table>

Conclusion

1. Unit was non-operational due to non-crushing season. Analysis results of samples collected from Ikra drain and bore well indicate no industrial impact. Unit was non-operational due to non-crushing season.
2. The unit has complied with recommendations of Joint Inspection report dated 02-03 Feb 2021 (detailed findings in above Part C) except following:

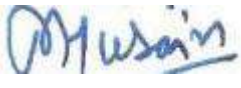
a. Unit has not reclaimed/filled up 4000 m^3 capacity lagoon near its agricultural fields completely. It was partially filled with mud and rainwater and HDPE lining still exists.
b. Unit has not implemented the suggestion to enhance capacity of water tank for filter backwashing The unit explained that the existing capacity has been sufficient which can be verified in periodic inspections of the unit in operational condition by UPPCB

3. The details of the verification of the directions of Hon'ble NGT passed vide judgement dated 01.09.2021 are mentioned in Part D of the report. Unit has complied all the points except the directions regarding interlocking of Pollution Control Devices with production processes.

Recommendations:

1. The unit shall either cover the 4000 m3 capacity earthen lagoon, which was used for storing treated effluent in the past, with brick-lining or reclaim/fill up it completely.
2. Unit shall implement a system for interlocking of the pollution control plants / devices and the production process, as directed by Hon'ble NGT-PB.

Inspection Team

S.No.	Inspecting Officials	Signature
1.	Sh. Nazimuddin, Scientist 'F', DH- IPC-II, CPCB, Delhi	
2.	Mrs Reena Satavan, Scientist 'E', CPCB, Delhi	
3.	Sh. Vijay, Regional Officer UPPCB, Regional Office- Bijnor	
4.	Sh. Mahir Hussain, AEE, Regional Office-Bijnor	

Photographs

Fig 1: 10000 m3 brick-lined lagoon

Fig 2: Kaccha lagoon (4000 m^3)

Fig 3: Dismantled old pumping station

Fig 4: Pipeline from lagoon for irrigation

Fig 5: ETP scheme

Fig 6: STP scheme

Fig 7: City drain for seage within unit premises

Fig 8: Condensate Polishing Unit

Fig 9: Common stack for both boilers

Fig 10: Aeration

Fig 11: Pumps dismantled

Fig 12: Connecting line with old pumping station blocked

Fig 13: Freshwater line to ETP dismantled

Fig 14: STP inlet flowmeter

Fig 15: Dismantled sump

Fig 16: Entrance gate

Annexure-D

Detailed site visit report of M/s Dhampur Sugar mills limited Chemical Division., (Distillery Division) Dhampur District Bijnor on 16.10.2024

Part A: General Information

1.	**Name of the unit with complete postal address:**	Dhampur Sugar Mills Ltd., Chemical Unit Dhampur, Bijnor (UP) 246761
2.	**Spatial Co-ordinates (Latitude & longitude**	Latitude: 29.28548 Longitude: 78.51535
3.	**Category**	Molasses and Grain based Distillery
4.	**Operational Status**	Non-Operational (The unit provided a copy of vide letter dated 12.10.2024 wherein it has informed to UPPCB that the unit has closed down its manufacturing operations from 12.10.2024 due to non- availability of raw material (molasses & Grain).

Consent & EC Status (common for both molasses and grain based distillery)

5.	**Consent status**	The unit is having common Consolidated Consent to Operate under section 25 of the Water (Prevention and control of Pollution) Act, 1974 and under section 21 of the Air (Prevention and control of Pollution) Act, 1981 issued on 06.04.2023 for production of 455 KLD Ethanol/Rectified Spirit/ ENA by using B Heavy molasses / grain or 490 KLD Ethanol/Rectified Spirit/ ENA by using cane juice syrup, 140 KLD Ethyl Acetate and 10.5 MW cogeneration power which is valid upto 31.12.2027. Consolidated consent is attached at **Annexure-5A.**
6.	**Hazardous waste Authorization**	Authorization under the provisions of Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 issued on 16.05.2021, valid upto 16.05.2026. Hazardous waste authorization is attached at **Annexure- 5B.**
7.	**Environment Clearance (EC)**	Unit has provided a copy of Environmental Clearance dated 20.03.2019 issued by MoEF&CC for expansion of molasses/grain based distillery from 200 KLPD to 350 KPD. Copy of same is attached at **Annexure- 5C.**

Source of Fresh Water (Borewell common for both molasses and grain based distillery)

8.	**No. of bore well and flow meters installation status**	02 number of Borewells, both having electromagnetic flowmeters
9.	**No Objection Certificate (NOC) for groundwater abstraction from CGWA/UPGWD & its Validity with date**	• Unit has obtained NOC from UPGWD for groundwater abstraction from 02 nos. of Borewell, both NOCs having validity upto 05.04.2029. • As per NOC, the unit can abstract total 830375 KL/annum or 2275 KL/day of freshwater combined from both Borewells (Borewell 1: 438000 KL/annum and Borewell 2: 392375 KL/annum). Copy of NOC for groundwater abstraction is attached at **Annexure- 5D-a and 5D-b)** • As per the records provide by unit, the unit has abstracted fresh water @162.4 KLD during July to October 2024 (July-

		9082.7 kl, Aug-7280.6 kl, Sept. 9812.8 kl and Oct. 1977.9 kl)], which is within the permissible limit of 2275 KL/day mentioned in NOC.

Production process - Molasses based distillery

10.	**Raw material:** B-Heavy Molasses & C-heavy Molasses	
11.	**Production**	
	a. Consented value	100 KL per day (Dual mode) + 250 KL per day (molasses) =350 KL per day
12.	**Manufacturing Process** ***Molasses (raw material) – Fermentation – Distillation – Alcohol (product)***	
	a. Consented discharge condition	Zero Liquid Discharge (ZLD)
	b. Type of Fermentation technology adopted	Batch type
	c. Type of Distillation technology adopted	Multi pressure distillation (MPR)
13.	**Production process-Grain based distillery**	
	Raw material	Maize , Broken rice (grain)
	Consented Production value	100 KL per day
	Manufacturing Process ***Grain – Fermentation – Distillation – Alcohol (product)***	
	Consented discharge value	ZLD
	Type of Fermentation technology adopted	Batch type
	Type of Distillation technology adopted	Multi pressure distillation (MPR)

14.	**Effluent Management scheme** **a. For Molasses** High strength effluent: Raw Spent wash→ Multi-Effect Evaporator →Incineration boiler→Ash provided to third party for granulation Low strength effluent: Blowdowns from Cooling towers & boilers, Multi-Effect Evaporator condensate etc. → Condensate Polishing Unit (CPU) **b. For Grain** Multi-Effect Evaporator →Decanter →Dryer→Dry distillers grain soluble (DDGS) sold to vendors

15.	**Details of Multi-Effect Evaporator (MEE) (for Molasses)**	
	a. No. of MEE	02 Numbers (Stand-alone Multi-Effect Evaporator & Integrated Multi-Effect Evaporator)
	b. Capacity and stages of MEE	02, 1260 falling film (4) and forced circulation (3) +2150 m^3/day falling film (4) and forced circulation
	Details of Multi-Effect Evaporator (MEE) (for Grain)	
	a. No. of MEE	01
	b. Capacity and stages of MEE	1080, Two Stage

16.	**Condensate Polishing Unit (common CPU for both grain and molasses distillery)**	
	a. CPU , Capacity	4500 KLD
	b. CPU Scheme Equalization-Anaerobic Treatment- Aerobic Treatment-Secondary Clarifier- MFG-ACF-UF-RO-UV	
	c. Use of treated Condensate	Cooling Tower Makeup + Fermentation
	d. CPU reject	MEE

17.	**Incineration Boiler (molasses based)**			
	a. Boiler capacity, fuel used, installed capacity, Air Pollution Control Device (APCD) installed and stack height			
	Boiler capacity	Fuel used	Air Pollution Control Device (APCD)	Stack height
	75 Ton Per Hour (TPH) (old incineration boiler)	Slop & Bagasse	Bag Filter	84 m
	55 Ton Per Hour (TPH) (new incineration boiler)	Slop & Bagasse	Electro Static Precipitator (ESP)	82 m
	b. Mode of ash disposal	Boiler Ash is provided to third party for granulation		
18.	**Dryer Details (Grain based)**			
	a. Dryer Capacity	70 TPD		
	b. No. of dryers	01		

19. **Lagoon Details:**

Presently there are 02 number of lagoon of total capacity 6000 m^3. The details are as below

No. of Lagoons	**Capacity (m^3)**	**Present Status**
Lagoon -1	2500	Filled with sludge and spent wash
Lagoon -2	3500	Raw spent was observed

Sewage Treatment

Unit has installed a STP of capacity 220 KLD which is common for treatment of sewage generated from industrial complex (Sugar & Distillery units) & residential colony. The details about the STP and sampling carried out by the joint team are incorporated in the relevant section of M/s Dhampur Sugar Mills Ltd., Sugar report. Also the analysis results of ground water sample are included in the report of sugar unit.

Part B: Verification of the recommendations of joint inspection report dated 26-03-2021

S. No	**Recommendations by Joint inspection report dated 26-03-2021**	**Verification by joint team as on date 16-10-2024**
1.	The unit has total 03 nos. of bore wells against 02 nos. of permitted borewells as per CGWA NOC. The unit shall	On the day of the visit, the joint team observed that the unit has dismantled 3rd borewell. ***(refer photograph no.2)***

	dismantle the 3rd non-operational borewell.	Now unit is having 02 nos. of permitted tube wells as per UPGWD NOC which is valid till 05.04.2029.
2.	The unit shall obtain hazardous waste authorization from the respective state pollution control board.	The unit has obtained authorization under the Hazardous and Other Waste (Management and Trans-Boundary Movement) Rules, 2016 vide letter dated 16-05-2021. The authorization is valid upto 16-05-2026**.** Copy of same is attached at **Annexure 5B.**
3.	The unit shall complete the construction work of STP at the earliest and shall treat the sewage generating from the residential colony as well as industrial plants in STP only.	The unit has installed STP of 220 KLD capacity and the same was found operational on the day of visit. The details of STP are mentioned in the sugar report.
4.	The unit shall ensure complete filling of both the (spent wash) lagoons of capacity 6159.60 KL and 10,173 KL with ash.	During visit both the lagoons of capacity 6159.60 KL and 10,173 KL were found filled and levelled with ash. ***(Refer photograph no. 6).***
5.	If the concerned state pollution control board allows the unit to carry out temporary bio-composting for utilization of bio-methanated sludge/spent wash, in that case the unit shall comply with the following: 1) The unit shall ensure to consume the bio-methanated spent wash in bio-composting before monsoon season. 2) After completion of the temporary bio-composting, the unit shall completely dismantle the pump sump of MEE concentrate, which is located at bio-compost yard of 10 acres. 3) After completion of the temporary bio-composting, the unit shall completely dismantle the newly built pipeline.	• UPPCB vide letter dated 23.02.2021 granted permission for the unit to consume the stored **30,000 KL** of bio-methanated spent wash through MEE followed by bio-composting between **05.03.2021 to 15.05.2021**. • Accordingly, unit informed that it has consumed bio-methanated spent wash in bio-composting after routing through MEE (log book attached). • Team verified the logbook and as per the records, the unit commenced its bio-composting cycle from 05.03.2021 to 15.05.2021, during which a total of 13,500 KL (approx. 50 % vol reduction) of concentrated spent wash was consumed. • During visit, it was observed that after consumption of bio-methanated spent wash, the unit has converted its bio-digester to molasses storage tank no.2 of capacity 10395.520 kl. (***refer photograph no.6)*** • No pipelines to carry spent wash were observed at the bio-composting yard as unit has dismantled all the pipelines.

		• The unit has dismantled and levelled the pump sump tank of MEE concentrate of capacity 300 kl. **(*refer photograph no. 3*)**

Part C: Verification of specific conditions of Environmental Clearance (EC):

The Unit has obtained Environment Clearance (EC) dated 20.03.2019 from Ministry of Environment, Forest & Climate Change (MoEF &CC) for expansion of molasses/grain based distillery from 200 KLPD to 350 KPD. During visit on 16.10.2024 team verified the compliance of the major EC conditions.

Point wise status of the EC conditions as mentioned under para 9 of EC dated 20.03.2019 is as follows:

Condition no. 9	**Status a on date 16.10.2024**
a) Consent to Establish/Operate for the project shall be obtained from the State Pollution Control Board as required under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.	The unit has obtained the requisite **Consents** from the Uttar Pradesh Pollution Control Board (UPPCB). The details of the same are mentioned in above part A (point 6)
b) As already committed by the project proponent. Zero Liquid Discharge shall be ensured and no waste/treated water shall be discharged outside the premises.	To maintain zero liquid discharge in molasses based distillery the unit has installed Multi effect evaporator followed by Incineration boiler. Further for treatment of condensate and other low strength effluent, the unit has installed a condensate polishing unit of capacity 4500m^3.However, during the site visit on **16.10.2024**, the unit was found non-operational due to non-availability of raw material and the zero liquor discharge status could not be verified.
c) Necessary authorization required under the Hazardous and Other Waste (Management and Trans-Boundary Movement) Rules, 2016, Solid Waste Management Rules, 2016 shall be obtained and the provisions contained in the Rules shall be strictly adhered to.	The unit has obtained authorization under the Hazardous and Other Waste (Management and Trans-Boundary Movement) Rules, 2016, which is valid until **16-05-2026**. The details of the same are mentioned in above part A (point 7)
d) To control source and the fugitive emissions, suitable pollution control device shall be installed to meet the	The unit has installed **two slop-fired incinerator boilers** with capacities of **75** Ton Per Hour (TPH) and **55** Ton Per

prescribed norms and /or the NAAQS. The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/SPCB guidelines.	Hour (TPH). To control air pollution, the unit has installed **Bag filters**, **Scrubber, and Electrostatic Precipitators (ESP)** systems along with the stacks of height 84 m & 82 m.
e) Total fresh water requirement shall not exceed 2275 cum/day proposed to be met from ground water. Prior Permission shall be obtained from the concerned regulatory authority/CGWA in this regard.	Unit has UPGWD NOC for groundwater abstraction for 02 no. of Borewell, having validity upto 05.04.2029 for combined abstraction of 830375 KL/annum or 2275 KL/day from both Borewell. The details of the same are mentioned in above part A (point 11)
(f) The spent wash shall be taken to multi effect evaporators (MEE) and the concentrated spent wash shall be incinerated in the boiler along with bagasse. & g) The distillery shall be permitted to operate throughout the year as proposed.	The unit has installed 02 Multi effect evaporators of capacity of 3419 KLD and 02 Incineration boilers of capacity 75 Ton Per Hour (TPH) & 55 Ton Per Hour (TPH). However due to non-availability of raw material unit was found non-operational.
k) The company shall undertake waste minimization measures as below: i. Metering and control of quantities of active ingredients to minimize waste. ii. Reuse of by-products from the process as raw materials or as raw material substitutes in other processes. iii. Use of automated filling to minimize spillage iv. Use of close feed system into batch reactors v. Venting equipment through vapour recovery system vi. Use of high pressure hoses for equipment clearing to reduce wastewater generation.	Waste minimization measures undertaken by the unit could not be verified as the unit was found non-operational on the day of visit.
l) The green belt of 5-10 m width shall be developed in more than 33% of the total project area, mainly along the plant periphery, in downward wind direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department.	Out of total plant area of 16 hectares (as per EC dated 20.03.2019), green belt has been developed on 5.4-hectare area i.e. 34.02 %. Both sugar and distillery unit were observed to be located within the same premises. During visit team observed that green belt is majorly developed near ETP & STP

	area, guest house and colony. Trees of guava, Sagwan, Shisham, Neem, Mango, Jamun, bamboo, babool, hibiscus etc. were observed along industry periphery.
o) For the DG sets, emission limits and the stack height shall be in conformity with the extant regulations and the CPCB guidelines. Acoustic enclosure shall be provided to DG set for controlling the noise pollution.	The unit is having DG set of 750 KVA having stack height of 6 mtrs, however team observed that DG is not provided with acoustic enclosure. ***(refer photograph no. 8)***
q) Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	As per the details provided by the unit, blood donation camp was organized on 15.06.2024 and eye checkup camp was held on 12.08.2024.
r) There shall be adequate space inside the plant premises earmarked for parking of vehicles for raw materials and finished products, and no parking to be allowed outside on public places. & v) There shall be adequate space inside the plant premises earmarked for parking of vehicles for raw materials and finished products, and no parking to be allowed outside on public places.	Team observed that unit is having adequate parking space earmarked for various purposes.
s) Storage of raw materials shall be either stored in stored in silos or in covered areas to prevent dust pollution and other fugitive emissions.	It was observed that unit is storing the raw material in silos , however the same were found empty during visit.
t) Continuous online (24x7) monitoring system for stack emissions shall be installed for measurement of flue gas discharge and the pollutants concentration, and the date to be transmitted to the CPCB and SPCB server. For online continuous monitoring of effluent the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises.	Unit has installed monitoring system for stack emissions on both Boilers of capacities 75 Ton Per Hour (TPH) & 55 Ton Per Hour (TPH) and is connected to CPCB & UPPCB server For online continuous monitoring of effluent, unit has installed 02 PTZ cameras and both are connected to CPCB & UPPCB server.

<u>Inspections by third party institutes authorised by CPCB in the past</u>

A third party technical institutes authorised by CPCB carried out annual inspection of the unit in operational condition on 15.01.202 & 18.03.2023 and the unit was found complying no effluent discharge condition during both inspections. The reports are attached at **Annexure 5 E & 5 F.**

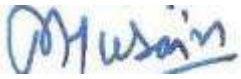
Conclusion:

1. Non-Operational due to non- availability of raw material (molasses & Grain).
2. The unit has complied with the recommendations of Joint Inspection report dated 02nd Feb 2021. Details of the same are mentioned in Part B of the report.
3. The detailed compliance status of Environmental Clearance (EC) conditions is mentioned at Part C. The unit has not compiled with the following conditions:
   a) DG is not provided with acoustic enclosure.

Recommendations

1. Unit shall provide acoustic enclosure at the DG set.

Inspection Team

S.No.	Inspecting Officials	Signature
1.	Sh. Nazimuddin, Scientist 'F', DH- IPC-II, CPCB, Delhi	
2.	Mrs Reena Satavan, Scientist 'E', CPCB, Delhi	
3.	Sh. Vijay, Regional Officer UPPCB, Regional Office- Bijnor	
4.	Sh. Mahir Hussain, AEE, Regional Office- Bijnor	

Photographs

Pic : 1 Entarance gate of the Unit

Pic:2 Dismantled 3rd borewell and concrete the area with cement

Pic: 3 Pump Sump system dismantled in bio-compost yard

Pic: 4 Silos for storage of grain

Pic: 5 Sewage Treatment Plant

Pic: 6 Levelled and filled lagoon of capacity 6159.60 m^3 &10173 m^3

Pic: 7 Sludge and spent wash found stored in settling tank of capacity 2500m3

Pic: 8 DG set

Pic: 9 boiler ash was found stored in bio-compost yard

Annexure 6

413

IN THE SUPREME COURT OF INDIA
CIVIL APPELLATE JURISDICTION

CIVIL APPEAL NO(S).5975/2021

M/S DHAMPUR BIO ORGANICS LIMITED & ORS. **Appellant(s)**

VERSUS

ADIL ANSARI & ORS. **Respondent(s)**

O R D E R

1. This appeal arises out of the judgment and order passed by the National Green Tribunal[1] dated 01.09.2021 in Original Application No.539 of 2019 as per which the Tribunal passed the following Order:

> **"157. We are further of the opinion that following directions are necessary for ensuring compliance of environmental norms by the units:-**
>
> **i.) All the Units must ensure continuous running of ETPs even during the non-crushing season for the adequate maintenance of required bio-mass so that the ETP is able to take the load/shock when it receives the pollution load/ effluent at the start of the crushing season.**
> **ii.) All the Units in question must provide for separate Energy Meter for entire ETP setup including its accessory units with data logging facility which shall be inspected by UPPCB and CPCB from time to time.**
> **iii.) UPPCB must ensure Interlocking of Pollution Control Devices with production processes (one way but not vice-versa) so as to ensure that whenever ETPs/PCDs are intentionally closed, the production also comes to halt.**

1"Tribunal"

iv.) Regular inspections should be carried out by the statutory authorities in both halves of the crushing season and also at least once in non-crushing season.

v.) Since the Asmoli Unit falls in the critical zone with respect to ground water withdrawal, an assessment of water recharge needs to be carried out by CGWA or UPGWB before issuance of NOC.

The Statutory Authorities are directed to ensure the above directions strictly so that industries may run without causing damage or loss to the environment as well as to the local inhabitants and farmers residing nearby the Units."

2. While issuing notice, this Court on 08.10.2021 passed an interim order to the following effect:

"Issue notice, returnable in six weeks.

In the meanwhile there will be a stay of the order impugned to restricted to the direction for payment of compensation of Rs.5,00,00,000/- (Rupees five crores only) in respect of each unit and to the costs of Rs.10,00,000/- imposed on the Respondent Nos. 1 to 3.

A committee may be constituted to make a detailed study as directed by the order impugned, but no further steps shall be taken by the Committee for a period of six weeks from date."

3. Pending disposal of the appeal on 06.09.2024, we directed for a joint report by the Central Pollution Control Board (CPCB) and the State Pollution Control Board indicating the compliances as per the directions of the National Green Tribunal.

4. In furtherance of our direction, a joint report dated 20.12.2024 is filed. The joint report speaks about the compliances rather non-compliances by the four units, the relevant portion of the report is as under:

“7.1 M/s Dhampur Bio Organics Ltd., Unit-Asmoli, District Sambhal(Sugar Unit)

Conclusion:

1. Unit was non-operational during joint site inspection by CPCB and UPPCB on 10.10.2024 due to non-crushing season. During survey of the surroundings of the unit and Sot river, no coloured water was visible at the time of visit.

2. The ground water sample analysis result does not indicate impact due to the industry.

3. The unit has complied with the recommendations of Joint Inspection report dated 13th January 2021. Details of the same are mentioned in Part C of the report.

4. The details of the verification of the directions of Hon’ble NGT passed vide judgement dated 01.09.2021 are mentioned in Part D of the report. Unit has complied all the points except the directions regarding interlocking of Pollution Control Devices with production processes.

5. The detailed compliance status of Environmental Clearance (EC) conditions is mentioned at Part E of the report. The unit has not compiled with the following conditions:

i.No rainwater harvesting system was observed in the plant.
ii.Not installed CAAQMS.

Inspections by third party institutes authorised by CPCB in the past:

A third party technical institutes authorised by CPCB carried out inspection of the unit in operational condition on 20-02-2022 and 01-03-2023 and unit was found complying standards during both Inspections.

Recommendations:

1. The unit shall maintain the ash disposal record with respect to disposal and distribution.

2. Unit shall implement a system for interlocking of the pollution control plants / devices and the production process, as directed by Hon’ble NGT-PB.

3. UPPCB shall carry out random inspection of the unit in operational condition.

4. Unit shall comply with following EC conditions:

i. Install CAAQMS stations as per EC condition.

ii. Make provision for rain water harvesting as per EC condition.

7.2 M/s Dhampur Bio Organics Ltd., Unit-Meergani, District Bareilly (Sugar Unit)

Conclusion:

1. Unit was non-operational during joint site inspection by CPCB and UPPCB on 18.10.2024 due to non-crushing season. During survey of the surroundings of the unit and Sot river, no coloured water was visible at the time of visit.

2. The ground water sample analysis result does not indicate impact due to the industry.

3. The unit has complied with the recommendations of Joint Inspection report dated 13th January 2021. Details of the same are mentioned in Part C of the report.

4. The details of the verification of the directions of Hon'ble NGT passed vide judgement dated 01.09.2021 are mentioned in Part D of the report. Unit has complied all the points except the directions regarding interlocking of Pollution Control Devices with production processes.

5. The detailed compliance status of Environmental Clearance (EC) conditions is mentioned at Part E. The unit has not compiled with the following conditions:

i. No rainwater harvesting system was observed in the plant.
ii. Not installed CAAQMS.

Inspections by third party institutes authorised by CPCB in the past:

A third party technical institutes authorised by CPCB carried out annual inspection of the unit in operational condition on 17-01-2022 and 15-02-2023 and unit was found complying standards during both

inspections.

Recommendations:

1. The unit shall maintain the ash disposal record with respect to disposal and distribution.

2. Unit shall implement a system for interlocking of the pollution control plants/devices and the production process, as directed by Hon'ble NGT-PB.

3. UPPCB shall carry out random inspection of the unit in operational condition.

4. Unit shall comply with following EC conditions:

i. Install CAAQMS stations as per EC condition.
ii. Make provision for rain water harvesting as per EC condition.

7.3 M/s Dhampur Sugar Mills Limited, Village Alhaipur, Tehsil Dhampur, District Bijnor (Sugar Unit)

Conclusion

1. Unit was non-operational during joint site inspection by CPCB and UPPCB on 16.10.2024 due to non-crushing season.

2. Analysis results of samples collected from Ikra drain and bore well indicate no industrial impact.

3. The unit has complied with recommendations of Joint Inspection report dated 02-03 Feb 2021 (detailed findings in Part C), except following:

a. Unit has not reclaimed/filled up 4000 m3 capacity lagoon near its agricultural fields completely. It was partially filled with mud and rainwater and HDPE lining still exists.

b. Unit has not implemented the suggestion to enhance capacity of water tank for filter backwashing. The unit explained that the existing capacity has been sufficient which can be verified in periodic inspections of the unit in operational condition by UPPCB.

4. The details of the verification of the directions of Hon'ble NGT passed vide judgement dated 01.09.2021 are mentioned in Part D of the report. Unit has

complied all the points except the directions regarding interlocking of Pollution Control Devices with production processes.

Inspections by third party institutes authorised by CPCB in the past

A third party technical institutes authorised by CPCB carried out annual inspection on 12-01-2022 and 14-02-2023. Unit was found not complying standards during inspection on 12-01-2022 and UPPCB issued show-cause notice to the unit on 22-02-2022 which was later withdrawn as unit was found complying standards in subsequent inspection by UPCB. Unit was found complying standards during inspection on 14-02-2023 by third party technical institute authorised by CPCB.

Recommendations:

1.The unit shall either cover the 4000 m3 capacity earthen lagoon, which was used for storing treated effluent in the past, with brick-lining or reclaim/fill up it completely.

2. Unit shall implement a system for interlocking of the pollution control plants / devices and the production process, as directed by Hon'ble NGT- PB.

3. UPPCB shall carry out random inspection of the unit in operational condition.

7.4 M/s Dhampur Sugar mills limited Chemical Division.,(Distillery Division) Dhampur District Bijnor on 16.10.2024

Conclusion:

1. Unit was non-operational during joint site inspection by CPCB and UPPCB on 16.10.2024 due to shortage of raw material (molasses & grain).

2. The unit has complied with the recommendations of Joint Inspection report dated 02nd Feb 2021. Details of the same are mentioned in Part B of the report.

Conclusion:3. The detailed compliance status of Environmental Clearance (EC) conditions is mentioned at Part C. The unit has not compiled with the following conditions:

a. DG is not provided with acoustic enclosure.

Inspections by third party institutes authorised by CPCB in the past:

A third party technical institutes authorised by CPCB carried out annual inspection of the unit in operational condition on 15.01.2022 and 18.03.2023 and the unit was found complying no effluent discharge condition during both inspections.

Recommendations:

1. Unit shall provide acoustic enclosure at the DG set.

2. UPPCB shall carry out random inspection of the unit in operational condition.

8. That in addition to the aforesaid submissions, it is humbly submitted that this Answering Respondent shall abide by any/all orders or directions passed by this Hon'ble Court."

5. It is evident from the above that there are certain directions of the National Green Tribunal which have been complied and some directions are not yet complied with. We are of the opinion that it would be appropriate if we direct the Tribunal to monitor the compliances and ensure that its judgment dated 01.09.2021 is fully implemented. After ensuring implicit compliances of the directions, the Tribunal may revisit the directions with respect to payment of compensation and pass such orders as may be necessary.

6. Before issuing any further directions, the Tribunal shall hear all the parties to the proceedings.

7. Pending disposal of the original application, the interim order(s) passed by this Court shall continue until modified by the National Green Tribunal, at its own discretion.

8. The Civil Appeal is disposed of in terms of the above.

.....J.
[PAMIDIGHANTAM SRI NARASIMHA]

.....J.
[MANOJ MISRA]

New Delhi
January 07, 2025.

ITEM NO.19 COURT NO.12 SECTION XVII

S U P R E M E C O U R T O F I N D I A
RECORD OF PROCEEDINGS

Civil Appeal No(s). 5975/2021

M/S DHAMPUR BIO ORGANICS LIMITED & ORS. Appellant(s)

VERSUS

ADIL ANSARI & ORS. Respondent(s)

(IA No. 123838/2021 - EXEMPTION FROM FILING C/C OF THE IMPUGNED JUDGMENT; IA No. 123839/2021 - EXEMPTION FROM FILING O.T.; IA No. 123836/2021 - STAY APPLICATION)

Date : 07-01-2025 These matters were called on for hearing today.

CORAM :
HON'BLE MR. JUSTICE PAMIDIGHANTAM SRI NARASIMHA
HON'BLE MR. JUSTICE MANOJ MISRA

For Appellant(s) **Ms. Amita Gupta Katragadda, Adv.**
Mr. Vikash Kumar Jha, Adv.
Ms. Namrata Sadhnani, Adv.
Ms. Ena Kapur, Adv.
M/S. Cyril Amarchand Mangaldas Aor, AOR

For Respondent(s) **Ms. Aishwarya Bhati,, A.S.G.**
Ruchi Kohli, Adv.
Swarupama Chaturvedi, Adv.
Chitrangda Rastravara, Adv.
Shraddha Deshmukh, Adv.
Dr. N. Visakamurthy, AOR

Mr. Saurabh Mishra, AOR
Mr. Shrimay Mishra, Adv.
Mr. Nirbhaya S Tewari, Adv.
Mr. Rakesh Chander, Adv.

Mr. Pradeep Misra, AOR
Mr. Daleep Dhyani, Adv.
Mr. Suraj Singh, Adv.

Ms. Preeti Singh, AOR

UPON hearing the counsel the Court made the following
O R D E R

1. The Civil Appeal is disposed of in terms of the signed order.

2. Pending application(s), if any, shall stand disposed of.

(INDU MARWAH)
AR-cum-PS

(NIDHI WASON)
COURT MASTER (NSH)

(Signed order is placed on the file)

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Annexure 7 (Colly)

2022 SCC OnLine NGT 1656

In the National Green Tribunal[†]

(By Video Conferencing)

(BEFORE ADARSH KUMAR GOEL, CHAIRPERSON, K. RAMAKRISHNAN, J.M., SUDHIR AGARWAL, J.M., SATYAGOPAL KORLAPATI, EXPERT MEMBER AND A SENTHIL VEL, EXPERT MEMBER)

Tandur Citizens Welfare Society Rangareddy District
... Applicant;

Versus

Government of Telangana, Rep by its Secretary, Environment and Forest Department, Hyderabad and Others ... Respondent(s).

Original Application No. 195/2016(SZ)

Decided on May 13, 2022

Advocates who appeared in this case:

Mrs. H. Yasmeen Ali, Advocate for R 1, R 6 & R 8., for the Respondent(s);

Mr. G.M. Syed Nurullah Sheriff, Advocate for R 2.

Mr. D.S. Ekambaram, Advocate for R 3.

Mr. T. Sai Krishnan, Advocate for R 4

ORDER

The Issue

1. Grievance in this matter pertains to air pollution caused in and around Tandur Village, Ranga Reddy District of Telangana State on account of operation of five cement factories in the area, having population of 75,000 in the Town and 1,50,000 in rural area around the town, apart from 50,000 floating population, as per case of the Applicant.

2. Case set out in the application is that the Ninth respondent cement factory was established in 1977; 10th respondent cement factory was established in 2000; 11th respondent cement factory was established in 2008 and 12 th and 13 th respondent cement factories were established in 2010. The State of Telangana has granted lease of thousands of hectares of land to these companies for quarrying lime stone and laterite etc. These cement companies have uprooted and removed over five lakh trees to convert the lands to suit their industrial purpose which includes laying of approach roads and railway lines. They have established the units after getting necessary approval from the

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competent authority but they are not following the conditions imposed. There is no proper scientific mechanism provided to suppress air pollution. Huge number of vehicles are being used and they are plying through narrow roads of villages and towns, causing huge air pollution. Though representations have been made to the authorities, they have failed to take any action. Air quality in that area has become worse, affecting health of the people. Though representation has been made to the Government with some recommendations to improve the situation, no action has been taken. Whenever complaints are made, some inspection is being done by Pollution Control authorities and in spite of being convinced that pollution is caused, they have not taken any stringent action against the units to arrest the air pollution caused due to the emission of dust, on account of operation of the units.

Final judgment dated 24.8.2021

3. After issuing notice to the cement factories as well as the regulatory authorities including the State PCBs of Telangana and Karnataka and the Railway Administration and considering the rival stands and the factual reports submitted by the statutory regulators on directions of this Tribunal, the Tribunal finally dealt with the matter vide judgment dated 24.08.2021. The operative part of the order of the Tribunal is as follows:—

"36. So, this application is disposed of as follows:—

i. The State of Telangana is directed to complete the acquisition proceedings and also shifting of the chip industries as informed to the State Pollution Control Board through Telangana State Industrial Infrastructure Corporation Ltd. vide their letter dated 23.07.2021 namely, within a total of 33 months. Out of which, the acquisition proceedings have been completed so that they will have to complete the process of shifting the units by establishing the industrial park in the proposed acquired area at the earliest but any rate within a period of 27 months from today.

ii. The Telangana State Pollution Control Board is directed to conduct periodical inspections of the area in question to a, scertain the Ambient Air Quality and if it exceeds the standard provided, then they are directed to take appropriate action by giving direction to the persons who are responsible for the same to avoid air pollution being caused in that area.

iii. The Telangana State Pollution Control Board is also directed to periodically inspect the cement factories in that area and also the railway sidings to ascertain as to whether there was any air pollution caused either due to the operation of the cement factories or during loading and unloading and if there is any excess pollution found, they are directed to take appropriate

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steps by giving direction to arrest the same by providing necessary pollution control mechanism, including imposing environmental compensation, if any, air pollution caused on account of such activities.

iv. The question of the interlocking system which has been introduced in cement factories can be extended to other industries as well where this Online Continuous Emission Monitoring System (OCEMS) is installed and State of Telangana and State Pollution Control Board are directed to take steps in this regard

v. The Central Pollution Control Board (CPCB) is also directed to consider this aspect and implement the same in other States as well

vi. The District Collector, Vikarabad District as well as the Telangana State Pollution Control Board are directed to file their periodical reports regarding the progress of the shifting and other activities and also the completion of road as directed by the Principal Bench of National Green Tribunal in the order mentioned above once in 6 (Six) months.

vii. The steps taken by the Telangana State Pollution Control Board and the Central Pollution Control Board in respect of giving direction to the other industries where the Online Continuous Emission Monitoring System (OCEMS) for providing interlocking system as directed by them in this case and submit a report to this Tribunal regarding the steps taken within a period of 3 (Three) months.

viii. The District Collector, Vikarabad District is also directed to monitor the progress of the work and also take appropriate steps to curb the air pollution that is being complained off by the people in the locality by taking appropriate action against the persons who are responsible for the same so as to avoid further complaints from the people in the locality. They can also take temporary measures to suppress the dust pollution that is being experienced by the people in the locality till the permanent measures suggested above were completed or accomplished.

ix. The Office is directed to place the reports as and when received before this Bench for consideration and also for giving further directions (if any) required in this regard.

x. Considering the circumstances, the parties are directed to bear their respective costs in the application."

Consideration of compliance status on 17.12.2021 and 9.2.2022

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4. After the above judgment, the matter was taken up for consideration of the reports in pursuance of directions of this Tribunal on 17.12.2021 and 09.02.2022 on the issue of interlocking system where OCEMS are installed and compliance of directions of the Tribunal on the issue of shifting of polluting industries. After consideration, the matter was deferred.

Further consideration today and final order

5. In continuation of earlier proceedings, we have heard learned counsel for the appearing parties and perused further reports filed by the CPCB and Telangana State PCB on 09.02.2022. On consideration thereof, we proceed to pass final order closing the proceedings.

Report on suggestion of interlocking system

6. Status report filed by the CPCB states that a Committee has been duly constituted as directed by this Tribunal which first held its meeting on 05.02.2022 and it was decided to introduce system to stop production on failure of the pollution control system subject to following conditions:—

a. Use of interlocking should be between the production process and the emission/effluent control equipment through a PLC and SCADA systems. It is not desirable to use such interlocking with OCEMS.

b. Instant shutting down of some industrial processes may pose risk of safety and health hazard to workers, due release of fugitive emissions/gases or discharges. Therefore, interlocking system may not be feasible in sectors such as pharmaceutical, petrochemical, etc.

c. Industrial processes are diversified across the sectors and specific arrangements/protocols may be required for each sector.

d. Interlocking systems may be implemented in only those industries, where such interlocking systems does not pose risk of safety and health hazard to workers.

e. Further, within industry, there is a need to identify feasible process areas where interlocking systems can be implemented effectively and safely.

f Interlocking systems may be implemented in phased manner in noncritical processes as part of the production process.

Committee recommended for Inputs/suggestions to be sought from State Pollution Control Board (SPCBs)/Pollution Control Committees (PCCs), to identify industries and the processes within industry for the feasibility of implementing interlocking systems, for further consideration."

7. Further report has been filed by CPCB on 06.05.2022 with regard to feasibility of interlocking of industrial process with OCEMS and

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assessment of feasibility of interlocking of industrial processes with OCEMS. Relevant extracts from the report is as follows:—

"3. Industrial Inter-Locking System

Many industrial sectors adopt interlocking system, where industrial operations are regulated with different control system such as instruments, devices, networks, etc. In such system, the control devices operate at pre-set parameters/range (mostly temperature and pressure), failing which interlocking system get triggered/activated to regulate the process. Such interlocking systems are used by industries to ensure quality control in product manufacturing, minimizing wastages/losses of raw-material/final product and to ensure safety in operations.

4. Assessment of feasibility of interlocking of industrial processes with OCEMS

In order to examine the feasibility of introduction of interlocking system in various industrial sectors having OCEMS, CPCB constituted a Committee, vide order no. CPCB/IPC-VI/OCEMS/Interlocking, dated 02.02.2022 (copy given at Annexure-I), comprising of the representatives of (i) National Environmental Engineering Research Institute (NEERI), Nagpur, (ii) National Chemical Laboratory (NCL), Pune, (iii) West Bengal Pollution Control Board, (iv) Maharashtra Pollution Control Board and (v) Central Pollution Control Board.

During the meetings held on 05.02.2022 and 02.05.2022, the Committee examined the matter and recommended the following:

i. The purpose of OCEMS is to regulate and minimize inspection of industries on routine basis by bringing self-discipline in the industries to exercise self-monitoring and compliance. Further, through continuous access of effluent and emission data, SPCBs/PCCs and CPCB also ensure constant vigil on environmental compliance by industries.

ii. OCEMS are linked to both CPCB and SPCB servers and SMS messages/alerts get generated in case of value of pollutant parameter exceeds prescribed environmental norms, non-acceptable variations in data and offline behaviour of OCEMS. The existing set up is adequate for self- monitoring and to initiate corrective action, including regulating the production process.

iii. It is not recommendable to use OCEMS based interlocking for instant shutting down of industrial processes, as the same may pose risk to safety, health hazard and uncontrolled emissions, due to incomplete chemical reactions/processing, especially in the industrial sectors such as chemical industries, copper smelters, thermal power plants etc.

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5. Steps taken by CPCB to ensure industrial compliance through OCEMS

The real-time OCEMS values of environmental pollutants of trade effluent and emissions, discharged from industrial units are transmitted online to CPCB and concerned SPCB/PCC servers on 24x7 basis. The central software processes the data and in case of value of pollutant parameter exceeds prescribed environmental norms, an automatic SMS messages/alert is generated and sent to industrial unit, SPCB and CPCB, so that corrective measures can be taken by the industry immediately and appropriate action can be taken by concerned SPCB/PCC.

CPCB also carries out inspection-cum-monitoring of industries, selected on the basis of the real time data received through OCEMS

installed in industries. Since 2016, on the basis of SMS alerts generated due to violations of environmental norms, CPCB has been carrying out inspection-cum-monitoring of 17 categories of highly polluting industries on random basis. In case of non-compliance, action against industry is taken under the provisions of Water Act, 1974, Air Act, 1981 and Environment (Protection) Act, 1986.

So far, CPCB has carried out inspection-cum-monitoring of 759 industries, out of which 370 units were found non-complying with prescribed environmental norms to whom show-cause notices or closure directions were issued under the provisions of Environment (Protection) Act, 1986. The sector-wise status of inspections carried out based on SMS alerts is given at Annexure-II.

6. Conclusion

Considering the present status of OCEMS and also keeping in view the risk to safety, health hazard and uncontrolled emissions in case of sudden shut-down of processes, it is not recommendable to force industries to install interlocking system between OCEMS and production processes, across all the sectors."

Report about progress on directions for shifting and other directions

8. The report filed by the Telangana State PCB is with reference to Acquisition proceedings and shifting of Stone Polishing Industries through TSIIC, Construction of By-pass Road for Tandur Town by R&B Dept., AAQM Monitoring in Tandur Town, Monitoring of Pollution of three Cement Industries located near Tandur Town and Providing interlocking system by the cement industries which have provided Online Continuous Emission Monitoring System (OCEMS). The suggestions and conclusions in the report are:—

VI. Suggestions and Conclusions:

The following measures are suggested to be taken up by the

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concerned Authorities to further improve the Ambient Air Quality in Tandur Town:—

i. The vehicles carrying raw materials and products shall be covered completely.

ii. The frequency of intervals of cleaning/sweeping of roads and water sprinkling through dedicated water tanker shall be increased in Tandur town.

iii. The stone cutting & polishing units shall not dispose stone chips & sludge along the roadside and shall dispose the same in the dedicated location allotted by Tandur Municipality,

iv. The R&B Department shall complete the by-pass road construction of Tandur Town at the earliest.

The Board will regularly monitor the Ambient Air Quality in Tandur Town and the Stack Emissions & AAQM in the Cement industries for compliance of the Board directions."

Final order closing the proceedings

9. This Tribunal has identified the remedial measures and issued final directions vide order dated 24.08.2021 which include progress report about compliance being put up. Such reports have been put and considered today and on two occasions earlier.

10. None appears for the Applicant. Since this Tribunal cannot be a substitute for the statutory regulators to continue to monitor compliance for indefinite period, we close the proceedings, reiterating the directions already issued, with liberty to aggrieved parties to move afresh if any grievance survives on account of non compliance of directions already issued or otherwise. However, the monitoring may be continued by the statutory regulators, in accordance with law.

———

† Special Bench

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BEFORE THE NATIONAL GREEN TRIBUNAL (SOUTHERN ZONE)
CHENNAI

Original Application No 195 of 2016 (SZ)

IN THE MATTER OF:

Tandur Citizens Welfare Society

…… Applicant

Versus

Government of Telangana & Ors.

……..Respondent(s)

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DEPONENT

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Regional Director
CENTRAL POLLUTION CONTROL BOARD
(MoEF & CC, Govt. of India)
Regional Directorate (Chennai)
2nd Floor, 77-A, South Avenue Road,
Symbiotic Industrial Estate, Chennai - 600 058

Date: 06.05.2022
Place: Chennai

Report on Feasibility of Interlocking System in Industries having Online Continuous Emission Monitoring Systems (OCEMS)

Submitted before

The Hon'ble National Green Tribunal, Southern Zone, Chennai

In the matter of

Tandur Citizens Welfare Society
v/s
Government of Telangana & Ors. (OA No. 195/2016 (SZ))

(May 06, 2022)

Central Pollution Control Board
'Parivesh Bhawan', East Arjun Nagar
Delhi-11003

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Report on Feasibility of Interlocking System in Industries having Online Continuous Emission Monitoring Systems (OCEMS)

1. Background

In the matter of Tandur Citizens Welfare Society v/s Government of Telangana & Ors., OA No. 195/2016 (SZ), filed before the Hon'ble NGT, Southern Zone, Chennai, the Telangana State Pollution Control Board in its report dated 26.07.2021 mentioned the following:

> *"3. The OCEMS was functioning continuously without any interruption from January 2021 to till date. With regard to the production,*
>
> *there will not be any impact on production due to non-functional of the OCEMS. However, based on the directions of the Board, all the three cement industries (M/s. India Cements Limited, M/s. Penna Cement Industries Ltd and M/s. Cement Corporation of India Ltd.) have installed interlocking systems. The purpose of the interlocking system is that whenever the control systems fails, the feed of raw material is cut off automatically and the emissions are controlled."*

Considering the fact regarding interlocking systems in cement industries, the Hon'ble NGT vide order dated 24.08.2021, directed as follow:

> *"iv. The question of the interlocking system which has been introduced in cement factories can be extended to other industries as well where this Online Continuous Emission Monitoring System (OCEMS) is installed and State of Telangana and State Pollution Control Board are directed to take steps in this regard.*
>
> *v. The Central Pollution Control Board (CPCB) is also directed to consider this aspect and implement the same in other States as well."*

2. Inception of Online Continuous Effluent/Emission Monitoring System (OCEMS) in industries

In order to strengthen the monitoring and compliance through self-regulatory mechanism, CPCB vide directions dated 05.02.2014 issued under Section 18(1)(b) of the Water (Prevention & Control of Pollution) Act, 1974, and 18(1)(b) of the Air (Prevention & Control of Pollution) Act, 1981 directed State Pollution Control Boards (SPCBs)/ Pollution Control Committees (PCCs) to ensure installation of Online Continuous Effluent/Emission Monitoring Systems (OCEMS) in 17 categories of highly polluting industries and common waste treatment facilities.

This step was taken to inculcate the habit of self-monitoring within the industries to ensure compliance of prescribed environmental standards. The OCEMS informs industries regarding the quality of effluent/emissions being discharged from stack/outlet on real-time basis and alerts them to take appropriate action in case of exceedance of pollutant parameters, to meet the prescribed environmental norms.

There are 4,247 industries under 17 categories of highly polluting industries, out of which 3,535 industries have installed OCEMS and provided data connectivity to CPCB and SPCB. For remaining 712 units, closure directions have been issued.

3. Industrial Inter-Locking System

Many industrial sectors adopt interlocking system, where industrial operations are regulated with different control system such as instruments, devices, networks, etc. In such system, the control devices operate at pre-set parameters/range (such as temperature, pressure, etc.), failing which interlocking system get triggered/activated to regulate the process.

Such interlocking systems are used by industries to ensure quality control in product manufacturing, minimizing wastages/losses of raw-material/final product and to ensure safety in operations.

4. Assessment of feasibility of interlocking of industrial processes with OCEMS

In order to examine the feasibility of introduction of interlocking system in various industrial sectors having OCEMS, CPCB constituted a Committee, vide order no. CPCB/IPC-VI/OCEMS/Interlocking, dated 02.02.2022 (copy given at **Annexure-I**), comprising of the representatives of (i) National Environmental Engineering Research Institute (NEERI), Nagpur, (ii) National Chemical Laboratory (NCL), Pune, (iii) West Bengal Pollution Control Board, (iv) Maharashtra Pollution Control Board and (v) Central Pollution Control Board.

During the meetings held on 05.02.2022 and 02.05.2022, the Committee examined the matter and recommended the following:

i. The purpose of OCEMS is to regulate and minimize inspection of industries on routine basis by bringing self-discipline in the industries to exercise self-monitoring and compliance. Further, through continuous access of effluent and emission data, SPCBs/PCCs and CPCB also ensure constant vigil on environmental compliance by industries.
ii. OCEMS are linked to both CPCB and SPCB servers and SMS messages/alerts get generated in case of value of pollutant parameter exceeds prescribed environmental norms, non-acceptable variations in data and offline behaviour of OCEMS. The existing set up is adequate for self-monitoring and to initiate corrective action, including regulating the production process.
iii. It is not recommendable to use OCEMS based interlocking for instant shutting down of industrial processes, as the same may pose risk to

safety, health hazard and uncontrolled emissions, due to incomplete chemical reactions/processing, especially in the industrial sectors such as chemical industries, copper smelters, thermal power plants etc.

5. Steps taken by CPCB to ensure industrial compliance through OCEMS

The real-time OCEMS values of environmental pollutants of trade effluent and emissions, discharged from industrial units are transmitted online to CPCB and concerned SPCB/PCC servers on 24x7 basis. The central software processes the data and in case of value of pollutant parameter exceeds prescribed environmental norms, an automatic SMS messages/alert is generated and sent to industrial unit, SPCB and CPCB, so that corrective measures can be taken by the industry immediately and appropriate action can be taken by concerned SPCB/PCC.

CPCB also carries out inspection-cum-monitoring of industries, selected on the basis of the real time data received through OCEMS installed in industries. Since 2016, on the basis of SMS alerts generated due to violations of environmental norms, CPCB has been carrying out inspection-cum-monitoring of 17 categories of highly polluting industries on random basis. In case of non-compliance, action against industry is taken under the provisions of Water Act, 1974, Air Act, 1981 and Environment (Protection) Act, 1986.

6. Conclusion

Considering the present status of OCEMS and also keeping in view the risk to safety, health hazard and uncontrolled emissions in case of sudden shut-down of processes, it is not recommendable to force industries to install interlocking system between production processes and OCEMS.

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Shollinganallur Industrial Estate, Chennai - 600 058

Annexure-1

केन्द्रीय प्रदूषण नियंत्रण बोर्ड
CENTRAL POLLUTION CONTROL BOARD
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय भारत सरकार
MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE GOVT. OF INDIA

OFFICE ORDER

CPCB/IPC-/OCEMS/Interlocking **02.02.2022**

Sub: Constitution of the Committee to examine the feasibility of interlocking system in industries having Online Continuous Effluent/Emission Monitoring System (OCEMS).

The Hon'ble NGT vide order dated 24.08.2021, in the matter of Tandur Citizens Welfare Society v/s. Govt. of Telangana & Ors., OA No. 195/2016 (SZ), directed Central Pollution Control Board (CPCB) to consider the aspect of interlocking system, which has been introduced in some of the cement industries in Telangana and implement the same in other industries where OCEMS systems are installed. The purpose of the interlocking system is that whenever the control system fails, the feed of raw material is cut-off automatically and the emissions are controlled.

02. To examine the matter, a Committee comprising of the following members is constituted:

Sl. No.	Name, Designation and Organization	Role
1	Shri B. Vinod Babu Sc. 'F' & Div. Head (IT), CPCB, Delhi	Chairman
2	Representative, CSIR- National Environmental Engineering Research Institute (NEERI), Nagpur	Member
3	Representative, CSIR-National Chemical Laboratory (NCL), Pune	Member
4	Representative, West Bengal Pollution Control Board	Member
5	Representative, Maharashtra Pollution Control Board	Member
6	Shri Nazimuddin Sc. 'F' & Div. Head (IPC-II), CPCB, Delhi	Member
7	Shri Abhijit Pathak Sc. 'D', AQMN Division, CPCB, Delhi	Member
8	Shri Ajay Aggarwal Sc. 'F' & Div. Head (IPC-VI), CPCB, Delhi	Member Convenor

03. The **'Terms of Reference'** of the Committee are as follows:

i. To examine the feasibility of introduction of interlocking system in various industrial sectors, where OCEMS are installed.
ii. The Committee may invite/nominate/co-opt expert members, industrial associations, etc., having expertise in the field of industrial process and pollution control.
iii. The Committee may meet as often as necessary.

'परिवेश भवन' पूर्वी अर्जुन नगर, दिल्ली-110032
Parivesh Bhawan, East Arjun Nagar, Delhi-110032
दूरभाष/Tel : 43102030, 22305792, वेबसाईट/Website : www.cpcb.nic.in

iv. The tenure of the Committee shall be for a period of three months from the date of issue of this office order.

v. The Committee will submit its recommendations by 31.03.2022, for further consideration.

vi. TA/DA reimbursement and sitting fees will be provided in accordance with the order dated 20/4/2017 of Hon'ble NGT, Principal Bench, New Delhi in the matter of O.A. No. 24 of 2011.

vii. The expenditure in this regard will be met from the Budget Head "NGT 25%" of CPCB.

This is issued with the approval of Competent Authority, CPCB.

(Ajay Aggarwal)
Director & Div. Head, IPC-VI

To:

1. All the Members of the Committee
(as per the list)

Copy to:

1 PS to MS : *for information of MS, please*
2 Div. Head (Law), CPCB, Delhi : *for information, please*

(Ajay Aggarwal)

To:

1 Shri B. Vinod Babu
Sc. 'F' & Div. Head (IT),
CPCB, Delhi

2 Director, CSIR- National Environmental Engineering Research Institute (NEERI), Nehru Marg, Nagpur- 440 020 : *with a request to nominate a representative.*

3 Director, CSIR-National Chemical Laboratory (NCL), Dr. Homi Bhabha Road, Pune - 411 008 : *with a request to nominate a representative.*

4 Member Secretary, West Bengal Pollution Control Board Paribesh Bhavan Building, No.10-A, Block –LA, Sector 3, Salt Lake City, Kolkata – 700 091 : *with a request to nominate a representative.*

5 Member Secretary, Maharashtra Pollution Control Board Kalpataru Point, 3rd& 4th floors Sion Matunga Scheme Road No. 6 Opp. Cine Planet, Sion Circle, Sion (E), Mumbai 400 022 : *with a request to nominate a representative.*

6 Shri Nazimuddin
Sc. 'F' & Div. Head (IPC-II),
CPCB, Delhi

7 Shri Abhijit Pathak
Sc. 'D', AQMN Division,
CPCB, Delhi

8 Shri Ajay Aggarwal
Sc. 'F' & Div. Head (IPC-VI),
CPCB, Delhi

BEFORE THE HONOURABLE NATIONAL GREEN TRIBUNAL (SZ) CHENNAI

O.A.NO.195 OF 2016

TANDUR CITIZENS WELFARE SOCIETY

… APPLICANT

VERSES

THE GOVERNMENT OF TELANGANA & 12 Ors.

… RESPONDENTS

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Place : Chennai
Date : 08.02.2022

DEPONENT

H.D. VARALAXMI, M.Tech
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CENTRAL POLLUTION CONTROL BOARD
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Regional Directorate (Chennai)
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Ambattur Industrial Estate, Chennai - 600 054

Status Report Submitted Before the Hon'ble National Green Tribunal, Southern Zone, Chennai

In the matter of

Tandur Citizens Welfare Society v/s Government of Telangana & Ors.
(OA No. 195/2016 (SZ))

(February 8, 2022)

Central Pollution Control Board
'Parivesh Bhawan', East Arjun Nagar
Delhi-11003

BEFORE THE HONOURABLE NATIONAL GREEN TRIBUNAL (SZ) CHENNAI

O.A.NO.195 OF 2016

TANDUR CITIZENS WELFARE SOCIETY

… APPLICANT

VERSES

THE GOVERNMENT OF TELANGANA & 12 Ors.

… RESPONDENTS

STATUS REPORT FILED ON BEHALF OF CENTRAL POLLUTION CONTROL BOARD (CPCB)

It is respectfully submitted that this Hon'ble National Green Tribunal (NGT), Southern Zone, Chennai, in the matter of Tandur Citizens Welfare Society v/s Government of Telangana & Ors., OA No. 195/2016 (SZ), vide order dated 24.08.2021, directed CPCB that-

> *"iv. The question of the interlocking system which has been introduced in cement factories can be extended to other industries as well where this Online Continuous Emission Monitoring System (OCEMS) is installed and State of Telangana and State Pollution Control Board are directed to take steps in this regard.*
>
> *v. The Central Pollution Control Board (CPCB) is also directed to consider this aspect and implement the same in other States as well."*

Steps taken by CPCB:

i. CPCB vide order no. CPCB/IPC-VI/OCEMS/Interlocking, dated 02.02.2022, constituted a Committee comprising of the representatives of (i) National Environmental Engineering Research Institute (NEERI), Nagpur, (ii) National Chemical Laboratory (NCL), Pune, (iii) West Bengal Pollution Control Board, (iv) Maharashtra Pollution Control Board and (v) Central Pollution Control Board, to examine the feasibility of introduction of interlocking system in various industrial sectors, where OCEMS are installed. A copy of CPCB office order dated 02.02.2022 is given at **Annexure-I**.

ii. First meeting of the Committee was conducted on 05.02.2022, wherein The committee discussed the matter in detail and observed that implementation of interlocking system to stop production process in case of failure of pollution control system need to be implemented based on following considerations:

   a. Use of interlocking should be between the production process and the emission/effluent control equipment through a PLC and SCADA systems. It is not desirable to use such interlocking with OCEMS.
   b. Instant shutting down of some industrial processes may pose risk of safety and health hazard to workers, due release of fugitive emissions/gases or discharges. Therefore, interlocking system may not be feasible in sectors such as pharmaceutical, petrochemical, etc.
   c. Industrial processes are diversified across the sectors and specific arrangements/protocols may be required for each sector.

d. Interlocking systems may be implemented in only those industries, where such interlocking systems does not pose risk of safety and health hazard to workers.

e. Further, within industry, there is a need to identify feasible process areas where interlocking systems can be implemented effectively and safely.

f. Interlocking systems may be implemented in phased manner in non-critical processes as part of the production process.

Committee recommended for Inputs/suggestions to be sought from State Pollution Control Board (SPCBs)/Pollution Control Committees (PCCs), to identify industries and the processes within industry for the feasibility of implementing interlocking systems, for further consideration.

A copy of the minutes of the meeting, held on 05.02.2022 is given at **Annexure-II**.

iii. CPCB vide letter dated 02.02.2022, requested all SPCBs/PCCs to provide suggestions/inputs to CPCB, in order to explore and consider the possibilities of implementing of interlocking system. A copy of the CPCB letter dated 02.02.2022 is given at **Annexure-III**.

H.D. VARALAXMI, M.Tech
Regional Director
CENTRAL POLLUTION CONTROL BOARD
(MoEF & CC, Govt of India)
Regional Directorate (Chennai)
2nd Floor, 77-A, South Avenue Road,
Ambattur Industrial Estate, Chennai - 600 05

केन्द्रीय प्रदूषण नियंत्रण बोर्ड
CENTRAL POLLUTION CONTROL BOARD
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय भारत सरकार
MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE GOVT. OF INDIA

OFFICE ORDER

CPCB/IPC-/OCEMS/Interlocking **02.02.2022**

Sub: Constitution of the Committee to examine the feasibility of interlocking system in industries having Online Continuous Effluent/Emission Monitoring System (OCEMS).

The Hon'ble NGT vide order dated 24.08.2021, in the matter of Tandur Citizens Welfare Society v/s. Govt. of Telangana & Ors., OA No. 195/2016 (SZ), directed Central Pollution Control Board (CPCB) to consider the aspect of interlocking system, which has been introduced in some of the cement industries in Telangana and implement the same in other industries where OCEMS systems are installed. The purpose of the interlocking system is that whenever the control system fails, the feed of raw material is cut-off automatically and the emissions are controlled.

02. To examine the matter, a Committee comprising of the following members is constituted:

Sl. No.	Name, Designation and Organization	Role
1	Shri B. Vinod Babu Sc. 'F' & Div. Head (IT), CPCB, Delhi	Chairman
2	Representative, CSIR- National Environmental Engineering Research Institute (NEERI), Nagpur	Member
3	Representative, CSIR-National Chemical Laboratory (NCL), Pune	Member
4	Representative, West Bengal Pollution Control Board	Member
5	Representative, Maharashtra Pollution Control Board	Member
6	Shri Nazimuddin Sc. 'F' & Div. Head (IPC-II), CPCB, Delhi	Member
7	Shri Abhijit Pathak Sc. 'D', AQMN Division, CPCB, Delhi	Member
8	Shri Ajay Aggarwal Sc. 'F' & Div. Head (IPC-VI), CPCB, Delhi	Member Convenor

03. The **'Terms of Reference'** of the Committee are as follows:

i. To examine the feasibility of introduction of interlocking system in various industrial sectors, where OCEMS are installed.
ii. The Committee may invite/nominate/co-opt expert members, industrial associations, etc., having expertise in the field of industrial process and pollution control.
iii. The Committee may meet as often as necessary.

iv. The tenure of the Committee shall be for a period of three months from the date of issue of this office order.

v. The Committee will submit its recommendations by 31.03.2022, for further consideration.

vi. TA/DA reimbursement and sitting fees will be provided in accordance with the order dated 20/4/2017 of Hon'ble NGT, Principal Bench, New Delhi in the matter of O.A. No. 24 of 2011.

vii. The expenditure in this regard will be met from the Budget Head "NGT 25%" of CPCB.

This is issued with the approval of Competent Authority, CPCB.

(Ajay Aggarwal)
Director & Div. Head, IPC-VI

To:

1. All the Members of the Committee
   (as per the list)

Copy to:

1. PS to MS — *for information of MS, please*
2. Div. Head (Law), CPCB, Delhi — *for information, please*

(Ajay Aggarwal)

To:

1 Shri B. Vinod Babu
Sc. 'F' & Div. Head (IT),
CPCB, Delhi

2 Director, CSIR- National Environmental Engineering Research Institute (NEERI), Nehru Marg, Nagpur- 440 020 : *with a request to nominate a representative.*

3 Director, CSIR-National Chemical Laboratory (NCL), Dr. Homi Bhabha Road, Pune - 411 008 : *with a request to nominate a representative.*

4 Member Secretary, West Bengal Pollution Control Board Paribesh Bhavan Building, No.10-A, Block –LA, Sector 3, Salt Lake City, Kolkata – 700 091 : *with a request to nominate a representative.*

5 Member Secretary, Maharashtra Pollution Control Board Kalpataru Point, 3rd& 4th floors Sion Matunga Scheme Road No. 6 Opp. Cine Planet, Sion Circle, Sion (E), Mumbai 400 022 : *with a request to nominate a representative.*

6 Shri Nazimuddin
Sc. 'F' & Div. Head (IPC-II),
CPCB, Delhi

7 Shri Abhijit Pathak
Sc. 'D', AQMN Division,
CPCB, Delhi

8 Shri Ajay Aggarwal
Sc. 'F' & Div. Head (IPC-VI),
CPCB, Delhi

A Agrwl
2/2/22

Minutes of the first meeting of the Committee, held on 05.02.2022, to examine the feasibility of interlocking system in industries having Online Continuous Effluent/Emission Monitoring System (OCEMS)

(Ref: Hon'ble NGT order dated 24.08.2021, in the matter of OA No. 195/2016 (SZ), Tandur Citizen Welfare Society v/s Govt. of Telanga & Ors.)

The Hon'ble NGT vide order dated 24.08.202, in the matter of Tandur Citizens Welfare Society v/s. Govt. of Telangana & Ors., OA No. 195/2016 (SZ), passed following directions:

> "iv. The question of the interlocking system which has been introduced in cement factories can be extended to other industries as well where this Online Continuous Emission Monitoring System (OCEMS) is installed and State of Telangana and State Pollution Control Board are directed to take steps in this regard.
>
> v. The Central Pollution Control Board (CPCB) is also directed to consider this aspect and implement the same in other States as well."

To assess the feasibility of such system, CPCB vide office order no. CPCB/IPC-VI/OCEMS/Interlocking, dated 02.02.2022, constituted a Committee. The first meeting of the Committee was held on 05.02.2022, through video conferencing. The list of the participants is given at **Annexure-I**.

Shri B. Vinod Babu, Scientist 'F' & Divisional Head (IT), CPCB, Delhi chaired the meeting and at the outset, welcoming all the members, he requested for active participation of the members. He further requested Shri Nazimuddin, Scientist 'F', CPCB to brief the issue to the Committee members.

Shri Nazimuddin informed that on detection of failure of emission control systems, the processes generating pollution are stopped so the uncontrolled emissions may be stopped. The interlocking is required between control system and process, not between OCEMS and process as per the above NGT order.

Dr. Vinay M Bhandari, Chief Scientist, Chemical Engineering and Process Development, CSIR- National Chemical Laboratory, Pune added that alternate/backup system for pollution control may be installed, and they can be activated in case of failure of primary systems, so the process may not be required to closed completely. Further, due to diverse nature of various industries, especially chemical industries, there is a need of specific arrangements/ protocols for those industries, apart from the safety aspect.

Dr. Kariampallil Varghese George, Chief Scientist & Head, Air Pollution Control Division, CSIR- NEERI, Nagpur, suggested that first it should be determined whether industries are the significant contributor in degradation of ambient air quality, before prescribing requirement of such interlocking systems.

Dr. V. M. Motghare, Joint Director, Air, Maharashtra Pollution Control Board was of the view that such system should initially be installed and operated in cement industries on pilot basis.

Shri Anjan Fouzdar, AEE, West Bengal Pollution Control Board informed to the Committee that interlocking mechanism was tried in some of the steel plants in West Bengal. In Program Logic Controller (PLC) based sponge iron and steel plants, failure of pollution control system,

detected based on Electrostatic Precipitator (ESP) temperature, stack cap opening etc., raw material feeding is cut-off manually.

Shri Abhijit Pathak, Scientist 'D', CPCB suggested that interlocking mechanism is not possible for some sectors such as pharmaceutical, petrochemical etc., where stoppage of intermittent reactions may cause health and safety hazards. Therefore, there should be a study/compilation indicating the list of sectors in which such system can be operated without any safety and health hazard. He also agreed that interlocking can be done between control system and process only.

Shri Ajay Aggarwal, Scientist 'F', CPCB informed Committee that CPCB vide letter dated 02.02.2022, already requested SPCBs/PCCs to provide their inputs/suggestions in this matter.

The committee discussed the matter in detail and recommend the following points:

i. Committee observed that implementation of interlocking system to stop production process in case of failure of pollution control system need to be implemented based on following considerations:

   - Use of interlocking should be between the production process and the emission/effluent control equipment through a PLC and SCADA systems. It is not desirable to use such interlocking with OCEMS.

   - Instant shutting down of some industrial processes may pose risk of safety and health hazard to workers, due release of fugitive emissions/gases or discharges. Therefore, interlocking system may not be feasible in sectors such as pharmaceutical, petrochemical, etc..

   - Industrial processes are diversified across the sectors and specific arrangements/protocols may be required for each sector.

   - Interlocking systems may be implemented in only those industries, where such interlocking systems does not pose risk of safety and health hazard to workers.

   - Further, within industry, there is a need to identify feasible process areas where interlocking systems can be implemented effectively and safely.

ii. Interlocking systems may be implemented in phased manner in non-critical processes as part of the production process.

iii. Inputs/suggestions may be sought from SPCBs/PCCs, to identify industries and the processes within industry for the feasibility of implementing interlocking systems.

The meeting ended with vote of thanks to the chair and the members.

****

Annexure-I 450

List of the Participants

1. Shri B. Vinod Babu, Scientist 'F' & Div. Head (IT), CPCB, Delhi
2. Dr. Kariampallil Varghese George, Chief Scientist & Head, Air Pollution Control Division, CSIR- NEERI, Nagpur
3. Dr. Vinay M. Bhandari, Chief Scientist, Chemical Engineering and Process Development, CSIR- National Chemical Laboratory, Pune
4. Dr. V. M. Motghare, Joint Director, Air, Maharashtra Pollution Control Board
5. Shri Subrata Ghosh, Chief Engineer, West Bengal Pollution Control Board
6. Shri Anjan Fouzdar, Assistant Environmental Engineer, West Bengal Pollution Control Board
7. Shri Nazimuddin, Scientist 'F' & Div. Head, (IPC-II), CPCB, Delhi
8. Shri Abhijit Pathak, Scientist 'D', Air Laboratory, CPCB, Delhi
9. Shri Ajay Aggarwal, Scientist 'F' & Div. Head, (IPC- VI), CPCB, Delhi
10. Shri Saubhagya Dixit, Scientist 'C', IPC-VI Division, CPCB, Delhi
11. Shri Vipin Kumar, SRF, IPC-VI Division, CPCB, Delhi
12. Ms. Kajal, Scientific Assistant, IPC-VI Division, CPCB, Delhi

केन्द्रीय प्रदूषण नियंत्रण बोर्ड
CENTRAL POLLUTION CONTROL BOARD
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय भारत सरकार
MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE GOVT. OF INDIA

CPCB/IPC-VI/OCEMS/Interlocking/ Dated: 02.02.2022

To

The Member Secretary
All SPCBs/PCCs
(as per the list)

Sub: Compliance of the Hon'ble NGT order dated 24.08.2021, in the matter of Tandur Citizens Welfare Society v/s. Govt. of Telangana &Ors., OA No. 195/2016 (SZ).

Sir,

This has reference to the Hon'ble NGT order dated 24.08.2021 (copy attached), in the matter of Tandur Citizens Welfare Society v/s. Govt. of Telangana &Ors., OA No. 195/2016 (SZ), wherein following directions were passed:

> *"iv. The question of the interlocking system which has been introduced in cement factories can be extended to other industries as well where this Online Continuous Emission Monitoring System (OCEMS) is installed and State of Telangana and State Pollution Control Board are directed to take steps in this regard.*
> *v. The Central Pollution Control Board (CPCB) is also directed to consider this aspect and implement the same in other States as well."*

The purpose of the interlocking system is that whenever the control system fails, the feed of raw material is cut-off automatically and the emissions are controlled.

In this regard, it is requested to provide your suggestions/inputs on the subject in order to explore and consider the possibilities of implementing of interlocking system.

An early action in this regard, preferably within 15 days, will be appreciated.

Yours faithfully,

(Ajay Aggarwal)
Director & Div. Head, IPC-VI

Encl.: as above.

Copy to:

i.	All Regional Directors, CPCB (as per the list)	: *With a request to follow-up with concerned SPCBs/PCCs & also to provide your suggestions/inputs*
ii.	The Division Head, CPCB, Delhi (as per the list)	: *With a request to provide your suggestions/inputs*
iii.	PS to Member Secretary CPCB, Delhi	: *For information, please*

O/C

Address List of Member Secretaries, SPCBs/PCCs			
1.	The Member Secretary Andhra Pradesh State Pollution Control Board D.No. 33-26-14 D/2, Near Sunrise Hospital, Pushpa Hotel Centre, Chalmvari Street, Kasturibaipet, Vijayawada- 520010 Andhra Pradesh	2.	The Member Secretary Arunachal Pradesh State Pollution Control Board 'ParyavaranBhavan', Yupla Road, PappuNallah, Naharlagun – 791110 Arunachal Pradesh
3.	The Member Secretary Assam State Pollution Control Board Bamunimaidan, Guwahati – 781021 Assam	4.	The Member Secretary Bihar State Pollution Control Board PariveshBhawan, Plot No.N-B/2, Patliputra Industrial Area Patna-800023
5.	The Member Secretary Chhattisgarh Environment Conservation Board Paryavas Bhawan, North Block Sector-19 Naya Raipur – 492 099 Chhattisgarh	6.	The Member Secretary Goa State Pollution Control Board Dempo Tower, EDC Plaza, 1st floor Patto Plaza, Panaji, Goa – 403001
7.	The Member Secretary Gujarat State Pollution Control Board Sector 10-A, Gandhi Nagar – 382043 Gujarat	8.	The Member Secretary Haryana State Pollution Control Board C-11, Sector 6, Panchkula, Haryana 134109
9.	The Member Secretary Himachal Pradesh State Pollution Control Board ParyavaranBhavan, Phase III, New Shimla – 171009 Himachal Pradesh	10.	The Member Secretary J&K State Pollution Control Board, Parivesh Bhawan, Forest Complex, Gladni, Narwal, Transport Nagar, Jammu- 180004 Jammu & Kashmir (J&K)
11.	The Member Secretary Jharkhand State Pollution Control Board T.A Building, HEC Campus, P.O. Dhurwa Ranchi – 834004 Jharkhand	12.	The Member Secretary Karnataka State Pollution Control Board ParisaraBhavan, 4th& 5th floors, Church Street, Bangalore – 560 001 Karnataka
13.	The Member Secretary Kerala State Pollution Control Board Plamoodu Junction, Pattam Palace P.O. Thiruvanathapuram – 695004 Kerala	14.	The Member Secretary Maharashtra State Pollution Control Board Kalpataru Point, 3rd& 4th floors Sion Matunga Scheme Road No. 6 Opp. Cine Planet, Sion Circle, Sion (E), Mumbai 400 022 Maharashtra
15.	The Member Secretary Madhya Pradesh Pollution Control Board ParyavaranParisar, E-5 Arera Colony Bhopal – 462016 Madhya Pradesh	16.	The Member Secretary Manipur State Pollution Control Board Lamphelpat, Imphal West D.C. Office Complex – 795004 Manipur
17.	The Member Secretary Meghalaya State Pollution Control Board Arden, Lumpyngngad, Shillong – 793014 Meghalaya	18.	The Member Secretary Mizoram State Pollution Control Board New Secretariat Complex, Khatla, Thlanmual Peng, Aizwal Mizoram- 796001
19.	The Member Secretary Nagaland State Pollution Control Board Signal Point, Dimapur, Nagaland – 797112 Nagaland	20.	The Member Secretary Odisha State Pollution Control Board ParibeshBhawan A-118, Nilakanta Nagar, Unit –VIII, Bhubaneshwar – 751012. Odisha

21.	The Member Secretary Punjab State Pollution Control Board Nabha Road, ITI Rd, Adarsh Nagar, Prem Nagar, Patiala - 147001. Punjab	22.	The Member Secretary Rajasthan State Pollution Control Board A-4 Institutional Area, Jhalane Dungri Jaipur – 302004. Rajasthan
23.	The Member Secretary Sikkim State Pollution Control Board State land Use & Environment Cell Govt. of Sikkim, Deorali, Gangtok. Sikkim	24.	The Member Secretary Tamil Nadu Pollution Control Board No. 76, Mount Salai, Guindy, Chennai - 600032. Tamil Nadu
25.	The Member Secretary Telangana State Pollution Control Board ParyavaranBhavan A-3, Industrial Estate, Sanath Nagar, Hyderabad – 500 018. Telangana	26.	The Member Secretary Tripura State Pollution Control Board Parivesh Bhawan, Pt. Nehru Complex, Gorkhabasti P.O., Kunjaban, Agartala, West Tripura - 799 006. Tripura
27.	The Member Secretary Uttarakhand Pollution Control Board Gaura Devi Bhawan, 46 B IT Park Sahastradhara, Dehradun- 248001 Uttarakhand	28.	The Member Secretary Uttar Pradesh State Pollution Control Board Building.No. TC-12V VibhutiKhand, Gomti Nagar, Lucknow– 226010. Uttar Pradesh
29.	The Member Secretary Andaman & Nicobar Islands Pollution Control Committee Department of Science & Technology Dollyganj Van Sadan, Haddo P.O., Port Blair-744102 Andaman & Nicobar	30.	The Member Secretary Chandigarh Pollution Control Committee ParyavaranBhawan Madhya Marg, Sector - 19 B, Chandigarh – 160019. Chandigarh
31.	The Member Secretary Daman, Diu & Dadra Nagar Haveli Pollution Control Committee Office of the Deputy Conservator of Forests Moti Daman, Daman – 396220. Daman & Diu	32.	The Member Secretary Delhi Pollution Control Committee 4th floor, ISBT Building, Kashmeri Gate, Delhi - 110006. Delhi
33.	The Member Secretary Lakshadweep Pollution Control Committee Lakshadeweep Administration Department of Science, Technology & Environment Kavarati – 682555. Lakshadweep	34.	The Member Secretary Puducherry Pollution Control Committee Department of Science, Technology & Environment Housing Board Complex, 3rd floor, Anna Nagar, Pondichery – 600 005
35.	The Member Secretary West Bengal State Pollution Control Board ParibeshBhavan Building, No.10-A, Block –LA, Sector 3, Salt Lake City, Kolkata – 700 091. West Bengal		

Address list of Regional Directors, CPCB

1.	The Regional Director Regional Directorate (East) Central Pollution Control Board 502, Southend Conclave 1582, Rajdanga Main Road Kolkata-700107	2.	The Regional Director Regional Directorate (Vadodara) Parivesh Bhawan, Opp. Ward No. 10 VMC Office Subhanpura, Vadodara – 390 023 Gujarat
3.	The Regional Director Regional Directorate (North-East) Central Pollution Control Board TUM-SIR, Lower Motinagar, Near Fire Brigade H.Q Shillong-793014	4.	The Regional Director Regional Directorate (Central) Central Pollution Control Board 3rd Floor, Sahkar Bhawan North T.T Nagar Bhopal- 462003
5.	The Regional Director Regional Directorate (North) Central Pollution Control Board Ground Floor, PICUP Bhawan Vibhuti Khand, Gomti Nagar Lucknow- 226020	6.	The Regional Director Regional Directorate (South) Central Pollution Control Board 1st & 2nd Floors, Nisarga Bhawan A-Block, Thimmaiah Main Road 7th D Cross, Shivanagar Opposite Pushpanjali Theatre Banglore 560010
7.	The Regional Director Regional Directorate (Chandigarh) Central Pollution Control Board BSNL Exchange, 2nd Floor Sector 49-C, Chandigarh-160047	8.	The Regional Director Regional Directorate (Pune) Central Pollution Control Board Survey No. 110, Dhankude Multi-Purpose Hall, Baner Road, Baner, Pune - 411045
9.	The Regional Director Regional Director - Chennai Central Pollution Control Board 77-A, Second Floor South Avenue Road, Ambattur Industrial Estate, Ambattur Taluk, Thiruvallur District, Chennai - 600 058		

List of the Divisional Heads, CPCB, Delhi

i.	IPC - I, II, III, IV, V & VII
ii.	WM - I, II & III
iii.	WQM - I & II
iv.	UPC - I & II
v.	Law

BEFORE THE NATIONAL GREEN TRIBUNAL (SOUTHERN ZONE) CHENNAI

O.A.NO.195 OF 2016

TANDUR CITIZENS WELFARE SOCIETY

… APPLICANT

VERSES

THE GOVERNMENT OF TELANGANA & 12 Ors.

… RESPONDENTS

STATUS REPORT FILED ON BEHALF CENTRAL POLLUTION CONTROL BOARD (CPCB)

Advocate D. S. Ekambaram

COUNSELS FOR CPCB

केन्द्रीय प्रदूषण नियंत्रण बोर्ड
CENTRAL POLLUTION CONTROL BOARD
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, भारत सरकार.
MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE, GOVT. OF INDIA.

Speed Post/Email

F. No. PJ-14011(12)/35/2022-WQM-II-HO-CPCB-HO **Date: 14.05.2025**

To,

(List enclosed)

Subject: Implementation of "Comprehensive Charter 2.0 for Water Conservation and Pollution Prevention" in Sugar industries operating in river Ganga & Yamuna main stem states"- reg.

Sir,

Central Pollution Control Board (CPCB) had formulated "Charter for Effluent Treatment by Sugar Factories situated in river Ganga basin" (Charter 1.0) to ensure adoption of cleaner technology, waste minimization practices and augmentation & up-gradation of Effluent Treatment Plants (ETPs) and to motivate sugar industries to comply with prescribed effluent discharge norms. The implementation of the Charter 1.0, resulted in (i) augmentation & up-gradation of existing effluent treatment plants upto tertiary level, (ii) increase in compliance percentage by 89%, (iii) reduction in specific fresh water consumption by 74%, (iv) reduction in specific effluent discharge by 30% and (v) reduction in organic pollution load by 2.1 TPD as compared to year 2016-17.

After successful implementation of Charter 1.0, CPCB has finalized the Charter 2.0, namely, "**Comprehensive Charter for Water Conservation and Pollution Prevention by Sugar Industries**" in consultation with all stakeholders for further improvement in Sugar Industries. Copy of Charter 2.0 is enclosed herewith for ready reference and also available on CPCB Website https://cpcb.nic.in/ngrba/Charter-2.0-Sugar.pdf.

It is requested to kindly circulate the Charter 2.0 to all the Sugar Industries in your state with instructions for its time bound implementation. Suggestive measures as given in Charter 2.0 may also be incorporated in CTO/CCA of Sugar Industries.

Action taken report may be forwarded to CPCB within 30 days of receipt of this letter.

Encl: As above

Yours faithfully,

(Bharat Kumar Sharma)
Member Secretary

Copy to,

1. **The Director General,** : for kind information, please
   National Mission for Clean Ganga,
   (MOWR, RD & GR) 1st Floor, Major Dhyan Chand
   National Stadium, India Gate,
   New Delhi-110002

2. **The Additional Secretary (CP Division), Ministry of Environment, Forest & Climate Change (MoEF& CC),** Prithvi Block, Indira Paryavaran Bhawan, Jorbagh Road, New Delhi – 110 003 : for kind information, please

3. **The Regional Director, Regional Directorate, Chandigarh,** Central Pollution Control Board, First Floor, BSNL Exchange Building, Sector-49, Chandigarh-160 047 : for follow-up, please

4. **The Regional Director, Regional Directorate (Lucknow),** Central Pollution Control Board, Ground Floor, PICUP Bhawan, Vibhuti Khand, Gomti Nagar, Lucknow-226 010(U.P.) : for follow-up, please

5. **The Regional Director, Regional Directorate, Kolkata,** Central Pollution Control Board, Southend Conclave, Block 502 5th & 6th Floors, 1582, Rajdanga Main road, Kolkata-700 107 (West Bengal) : for follow-up, please

6. **The Director, National Sugar Institute,** G.T. Road, near Kalyanpur railway station, Kalyanpur, Kanpur, Uttar Pradesh-208017 : for kind information, please

7. **The Director General, Vasantdada Sugar Institute,** Manjari Budruk, Haveli, Pune, Maharashtra – 412307 : for kind information, please

(Bharat Kumar Sharma)

List of State Pollution Control Boards (SPCBs)

1. **The Member Secretary,**
   Uttarakhand Pollution Control Board,
   Gaura Devi Bhawan, 46B IT Park,
   Sahastradhara, Dehradun- 248001, Uttarakhand.

2. **The Member Secretary,**
   Uttar Pradesh Pollution Control Board,
   Building. No. TC-12V, Vibhuti Khand,
   Gomti Nagar, Lucknow-226010, Uttar Pradesh.

3. **The Member Secretary,**
   Haryana State Pollution Control Board,
   C-11, Sector-6, Panchkula,
   Haryana-134109, Haryana.

4. **The Member Secretary,**
   Bihar State Pollution Control Board,
   Parivesh Bhawan, Plot No. NS-B/2,
   Patliputra Industrial Area,
   Patliputra, Patna- 800 010, Bihar.

5. **The Member Secretary,**
   West Bengal Pollution Control Board,
   Paribesh Bhavan, 10A, Block-L.A., Sector III,
   Bidhannagar, Kolkata-700 106, West Bengal.

LiFE
Lifestyle for Environment

COMPREHENSIVE CHARTER 2.0 FOR WATER CONSERVATION AND POLLUTION PREVENTION BY SUGAR INDUSTRIES

CPCB

CENTRAL POLLUTION CONTROL BOARD

MAY, 2025

ABBREVIATIONS AND ACRONYMS

ACF	Activated Carbon Filter
AT	Aeration Tank
IER	Ion Exchange Resin
%	Percentage
@	At the rate of
<	Less than
APCD	Air Pollution Control Device
APH	Air Pre-heater
BOD	Biological Oxygen Demand
BMT	Bare Minimum Technologies
CAQM	Commission for Air Quality Management
CGWA	Central Ground Water Authority
CO_2	Carbon Dioxide
COD	Chemical Oxygen Demand
CPCB	Central Pollution Control Board
CPU	Condensate Polishing Unit
CSTR	Continuous Stirred Tank Reactor
CTE	Consent To Establish
CTO	Consent To Operate
DCS	Distributed Control System
DO	Dissolved Oxygen
DSM Screen	Dutch State Mines Screen
DMR	Daily Manufacturing Record
DM Water	Demineralized Water
EBP	Ethanol Blending Policy
ENA	Extra neutral alcohol
EMC	Environmental Management Cell
EPR	Extended producer responsibility
ESP	Electrostatic Precipitator
ETP	Effluent Treatment Plant
G.S.R.	General Statutory Rules
HCL	Hydrochloric Acid
Hon'ble NGT	Honourable National Green Tribunal
hr	Hour
HW	Hazardous Wastes
i.e.	That is
IIT	Indian Institute of Technology
IMFL	Indian Made Foreign Liquor
kg/cm²	Kilogram per square meter
L/T	Litre per ton
Lit	litre
m^2	Square meter
m^3	Cubic meter
Max.	Maximum

MF	Microfiltration
mg/l	Milligram per litre
mg/nm^3	Milligram per newton cubic meter
MGF	Multi Grade Filter
MLSS	Mixed Liquor Suspended Solids
MLVSS	Mixed Liquor Volatile Suspended Solids
MoEF&CC	Ministry of Environment Forest and Climate Change
MoJS	Ministry of Jal Shakti
MT	Metric Tonne
MTD	Metric Tonne Per Day
MVR	Mechanical Vapour Recompression
MW	Megawatt
NCR	National Capital Region
NMCG	National Mission for Clean Ganga
NO_2	Nitrogen Di-oxide
NOCs	No Objection Certificates
NSI	National Sugar Institute
^oC	Degree centigrade
OCEMS	Online Continuous Effluent System
PCT	Process Cooling Tower
pH	Potential of Hydrogen
PI	Preparatory Index
PPM	Parts Per Million
PPE	Provision of personal protective equipment
PSM	Process Safety Management
RMC	Ready Mix Concrete
RME	Reduced Mill Extraction
RVF	Rotary Vacuum Filter
RBC	Return Bagasse Carrier
RO	Reverse Osmosis
SO_2	Sulphur Di-oxide
SOPs	Standard Operating Procedures
SPCB	State Pollution Control Board
SRS	Sulphate Removal System
TCD	Ton Crush per Day
TDS	Total Dissolved Solids
TPD	Tonne Per Day
TSDF	Treatment, storage and disposal facility
TSS	Total Suspended Solids
TVR	Thermal Vapour Recompression
UGR	Under Ground Reservoir
UASB	Up-flow Anaerobic Sludge Blanket Reactor
viz.	Namely
VSI	Vasantdada Sugar Institute
WBT	Wet Bulb Temperature
WTP	Water Treatment Plant

ISMA	Indian Sugar Mills Association
UPSMA	UP Sugar Mills Association

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1. REGULATORY FRAMEWORK AND EVOLUTION OF SUGAR CHARTER

The Government of India vide Gazette Notifications dated January 15th, 2016 G.S.R. 35 (E) in exercise of the powers delegated by section 6 and 25 of the Environment (Protection) Act, 1986, notified the standards for sugar industries for quality of treated effluent. The discharge norms are tabulated below:

Table 1: Notified discharge standards under E(P)Act, 1986 for sugar industries

Industry	**Parameters**	**Standards (*All concentration values are in milligramme per litre except for pH*)**
Sugar Industry	pH	5.5 – 8.5
	Total Suspended Solids (TSS)	100 (for disposal on land) 30 (for disposal in surface waters)
	Biological Oxygen Demand, BOD (3 days at 27°C)	100 (for disposal on land) 30 (for disposal in surface waters)
	Oil & Grease,	10
	Total Dissolved Solids (TDS)	2100
	Final wastewater discharge limit	200 litre per tonne of cane crushed
	(Final treated effluent discharge restricted to 100 litre per tonne of cane crushed and Waste water from spray pond overflow or cooling tower blow down to be restricted to 100 litre per tonne of cane crushed and only single outlet point from unit is allowed.)	
	EMISSIONS	
	The particulate matter emissions from the stack shall be less than 150 milligram per normal cubic metre	

In these standards, the emphasis was only on effluent characteristics and discharge quantity. However, Sugar industry is water surplus industry where the water comes in system from Sugarcane (approx. 70%) which was not focused in notified norms.

With declaration of river Ganga as National River and constitution of National Ganga River Basin Authority (NGRBA) to ensure effective abatement of pollution and

conservation of the river Ganga, the issue of minimizing the environmental impact of sugar industries on water quality of river Ganga and its tributaries became a priority agenda before the regulatory agencies. Prior to crushing season 2017-18 most of the sugar industries in river Ganga basin were not having adequate and functional effluent treatment plants (ETPs) and were engaged in the disposal of untreated/partially treated effluent in waterbodies which was ultimately reaching river Ganga & its tributaries. The major reasons for adverse environmental impact of sugar industries on water quality of river Ganga and its tributaries were non-existence of functional & adequate ETPs, lack of process optimisation, intensive use of freshwater (250-350 L/T of cane crushed), lack of awareness and unskilled manpower for proper operation and maintenance of ETP and consequently high discharge of effluent etc. and most importantly lack of technical know-how to adopt desired infrastructure for treating the effluent so as to have control over the quantum and quality of effluent.

To address these issues, CPCB organised series of meeting with sugar industries and other stake holders during 2017-2018. In these meetings it was decided that all the sugar industries situated in the Ganga Basin shall up-grade the effluent treatment facilities at their end and will get Effluent Treatment Plant (ETP) adequacy reports and up-gradation plan prepared from reputed expert institutions. CPCB also constituted an Expert Committee comprising experts from NSI, IIT, VSI, Indian Sugar Mills Association (ISMA), UP Sugar Mills Association (UPSMA) and industry representatives.

The purpose of this initiative was to develop a self- regulatory approach amongst the industries for complying with the set standards, improvement of the quality of the discharged effluent and to minimize the specific freshwater consumption.

Accordingly, the “charter for effluent treatment by Sugar industries situated in river Ganga Basin” was formulated during 2018. The purpose of formulating the charter was to enforce appropriate technologies for effluent treatment in sugar industries in Ganga basin and to motivate them to accomplish desired level of environmental protection and achieve prescribed discharge norms so as to meet objective of clean river Ganga. The Charter took a holistic approach for pollution prevention by emphasizing on process technology up-gradation, adoption of waste minimisation practices, besides quantum improvement in effluent treatment technologies including reduction in specific fresh water consumption requirement through water recycling and metering. The Charter also

suggested Bare Minimum Technologies (BMT) as an indication of the set of desired technologies.

Meetings were organised under the chairmanship of Principal Secretary, Sugar industry and Sugarcane Development Department of Uttar Pradesh & Uttarakhand and Chairman, Bihar State Pollution Control Board with Sugar industries during 2018 to facilitate the industries and their associations for implementation of sugar Charter. Orders dated 17.07.2018, 30.07.2018 and 21.08.2018 were issued by State Sugarcane Development Departments of U.P, Uttarakhand and Bihar State Pollution Control Board, respectively for implementation of the Charter. Before the commencement of crushing season 2018-19, CPCB also issued directions under section 5 of Environment (Protection) Act, 1986 to Sugar Industries for implementation of the action points in line with the Charter recommendations.

In the first phase of the Charter implementation, the sugar industries were required to carry out adequacy assessment of ETPs, identification of the gaps in effluent management and downstream technologies. Accordingly, action plans were to be prepared to upgrade the technologies for ensuring compliance with the discharge norms. Thereafter, in the second phase, Evaluation/ Validation of above work plan was carried out by expert technical institutes in respect of implementation of the suggestions given in the adequacy assessment reports. The major highlights of the Charter are as below:

- Participatory approach to facilitate the industries for pollution control
- Third party involvement for planning, assessment, design and monitoring
- Upgradation of ETP upto tertiary treatment level
- Metering at water abstraction points, water use, waste generation and discharge points
- Adequacy of ETP and Water Audit by technical institutes
- Self-monitoring and reporting
- Maintenance of log books and record keeping
- Installation of Condensate Polishing Unit (CPU) where high pressure boiler (more than greater than or equal to 45 kg/cm^2 working pressure).
- Recirculation of water employed in SO_2 gas coolers massecuite cooling and elsewhere
- Use of surplus cooled condensate as make up water replacing fresh water
- Use of membrane-based technology to attain brine recovery

- Development of proper infrastructure for operation and maintenance of ETP
- Commissioning of mechanical sludge handling system of adequate capacity
- Preparation of Irrigation Management Plan
- Installation of OCEMS and its connectivity to CPCB and SPCB servers
- Development of Environmental Management Cell (EMC)

Successful implementation of Charter resulted in following:

- Reduction in specific fresh water consumption by 74% as compared to 2016-17. This resulted in saving of approx. 2500 million litres of fresh water in spite of increase in total production in 2022-23 with respect to 2016-17.
- BOD load has also reduced from 8.45TPD to 2.1TPD from 2017 to 2023.
- Sugar industries had prepared irrigation management plan for the utilization of treated effluent in irrigation.
- Augmentation & Updation of effluent treatment plants upto tertiary level.
- Metering at the various recycling points in the sugar process as well as at all water abstraction points along with ETP inlet and outlet point.
- Adequacy of effluent treatment plants by the sugar industries situated in the Ganga basin.
- Proper record keeping
- Installation of condensate polishing unit for the treatment of excess condensate for its further utilization in the sugar process
- Installation of Online Continuous Effluent Monitoring System (OCEMS)

2. CURRENT STATUS OF SUGAR INDUSTRY ON MAIN STEM OF RIVER GANGA AND YAMUNA

On the main stem of river Ganga and Yamuna around 155 nos. of sugar industries are located with crushing capacity range of 2500 to 16000 TCD as per the inventory of year 2024, which constitute about 22% of country's sugar sector. Sugar industries processes sugarcane as raw material to produce either sulphited or refined sugar., These industries are spread over the states of Uttarakhand, Haryana, Uttar Pradesh, Bihar & West Bengal. Out of 149 sugar industries inspected in the crushing season 2022-23, 115 (83 in river Ganga main stem states and 32 in river Yamuna main stem states) were found operational with an average crushing of around 646447.80 MT/day. Category wise number of operational sugar industries is shown in Table 2 below:

Table 2: Category-wise sugar data for the crushing season 2022-23

category / State	Standalone	Sugar with co-generation	Refinery	Refinery with co-generation
Uttarakhand	05	02	01	-
Haryana	02	06	-	01
Uttar Pradesh	34	36	07	19
Bihar	01	-	-	01
West Bengal	-	-	-	-
Total	42	44	8	21

3. CHARTER 2.0

3.1 NEED FOR CHARTER 2.0

Significant achievements have been observed over a period of time (from the year 2017 to 2023) in terms of the reduction in fresh water consumption, effluent discharge, treatment and management of sugar effluent and maintenance of effluent standards as well as energy saving in sugar sector due to the effective implementation of the charter 1.0. However, during various interactions, meetings, seminars held with Sugar industries certain issues pertaining to sugar industries emerged such as groundwater exploitation due to excessive freshwater consumption, high quantum of effluent generation, under capacity of ETP, sludge management, brine reject management, non-compliance w.r.t. stack emissions norms, untrained and inadequate manpower, storage and handling of press mud, handling and disposal of boiler/bottom & fly ash, poor performance of ETP & non-compliance with effluent discharge norms, difference in treated water reuse opportunity because of factors like different plant configuration, type of molasses diversion, sugarcane variety and varying weather conditions during crushing season (November to April). Due to these issues, increase in number of legal litigation related to sugar industries was noticed. Therefore, it is high time to address these issues and hence, the charter needs to be updated in order to develop a more holistic and comprehensive version.

During recent inspections by CPCB officials under 'Environmental Surveillance of 17 categories of highly polluting industries and common facilities, based on OCEMS data', Public complaints, court/NGT matters, and annual inspections by CPCB authorized Third Party Technical Institutes, the following issues have emerged:

3.1.1 Groundwater exploitation due to excessive freshwater consumption

The sugar industry is the sector where excess water enters the system from raw material since sugarcane contains 70% water which amounts to approx. 700-750 lit/tonne of cane crushed.

It has been observed that the sugar industries are using significant amount of freshwater, about 100-200 litres per ton of crushed cane from groundwater through bore wells. Sugar industries acquire ‘No Objection Certificates (NOCs)’ for three to six bore wells from the CGWA/State ground water department. The quality of groundwater in areas next to sugar industries has declined due to overexploitation and intensive irrigation in sugarcane field in the command areas. It has been found through a number of

groundwater quality studies that the groundwater around sugar industries is becoming unfit for human consumption due to high levels of conductivity, hardness, alkalinity, sulphate and iron.

Therefore, usage of the large quantity of fresh water resource by sugar and its allied industries is a matter of concern. Hence, sugar industries need to explore the possibilities of optimizing the reuse and recycling of the excess condensate and treated effluent in the process. Groundwater overuse can be reduced with such utilization and initiatives.

The consumption of freshwater in sugar industries depends on various factors such as:

a) Type of sugar category i.e. standalone, sugar with co-gen etc.

Depending upon the configuration the range of freshwater consumption in sugar industries varies from 50-150L/ton of cane crushed. In the case of Standalone sugar industry, fresh water consumption is around 50-70 L/T of cane crushed. In the case of sugar sulphitation industry with co-generation, the range of fresh water consumption is approx.100-150 L/T of cane crushed. Similarly, in the case of sugar refinery industry with co-generation, the range of freshwater consumption is 100-150 L/T of cane crushed. Variation in freshwater consumption in different categories of sugar industries is mainly due to the variation in steam requirement and boiler feed water quality.

b) Type of boiler and mode of turbine operation

The choice between a high-pressure and a low-pressure boiler in a sugar industry largely depends on the size of industry, its energy needs, and its operational goals.

High-pressure boilers operate at pressures above 42 Kg/cm^2. The steam generated is at a higher temperature and pressure, making it highly efficient for power generation through turbines. High-pressure boilers are more suited to larger industries with higher energy requirements and a focus on maximizing electricity generation for internal use and revenue generation through power export. Modern sugar industries tend to favour high-pressure boilers due to their energy efficiency and potential to cut costs and generate additional revenue. Moreover, with increasing focus on sustainable practices, the efficient conversion of bagasse into both sugar and energy using high-pressure systems aligns well with environmental goals.

Low-pressure boilers typically operate at pressures below 42 Kg/cm^2. The steam generated is suitable for low power needs and is used primarily for process heating in

various applications. They are mostly used in smaller industries where the scale and scope of operations justify a simpler, more cost-effective steam generation system.

In low pressure boilers, fresh water is only required for initiation of boiler operation, which is approx. 50 L/ton of cane crush. Thereafter, process condensate is utilized as a feed for steam generation. Whereas, in case of high pressure boilers freshwater consumption varies between 70-150 L/ton of cane depending upon the turbine operation mode i.e. back pressure mode and condensing mode.

In back pressure turbine mode, the steam exhausts at a higher and fixed pressure which can then be used directly in the sugar manufacturing process or for heating. This mode allows the turbine to generate both power and useful thermal energy (in the form of steam). While the electrical efficiency of back pressure turbines is lower than that of condensing turbines, they are more efficient in terms of overall energy utilization, as they cogenerate heat and electricity. This mode is ideal during the crushing season when there is significant demand for process steam in the mill for heating, evaporation, and other processes.

In condensing turbine mode, the steam is cooled in the condenser, turns back into water and is then returned to the boiler. This mode is designed to produce maximum electricity from the available steam. This mode is highly efficient in terms of electricity generation as it generates more power production per ton of steam. Condensing turbines are generally used when there is a more power generation and less need for process steam such as during non-crushing seasons or in mills where surplus power is sold to the electricity grid.

c) Seasonal variation in terms of evaporation losses

Surplus water available in sugar industries is not a constant parameter as it varies according to atmospheric conditions such as temperature, humidity etc. As observed, in the month of November, December and January the percentage of juice brix is low, water input from cane remains high and hence the fresh water requirement remains on lower side whereas during the months of February, March and April the percentage of juice brix is higher and water input from cane reduces hence the fresh water requirement increases. Due to ambient temperature difference there are variation in evaporation losses, also.

Variation in fresh water consumption in different categories of sugar industries is tabulated in table no. 3 below:

Table 3. Different scenarios of effluent generation and freshwater consumption in different categories of sugar industries

S. N.	Category	Sub-category	Type of turbine	Category code	Type of molasses	Fresh water consumption	Final Discharge (including spray pond overflow)
1	Standalone (S)	Sugar mill Sulphitation and low pressure boiler	Back pressure turbine	S1	C heavy	70 Ltrs/MT of cane	230-260 Ltrs/MT of cane
2					B heavy	70 Ltrs/MT of cane	250-280 Ltrs/MT of cane
3					Syrup and B-heavy	70 Ltrs/MT of cane	235-260 Ltrs/MT of cane
4		Sugar mill Sulphitation and high pressure boiler	Condensing mode turbine	S2A	C heavy	120 -150 Ltrs/MT of cane	190-220 Ltr/MT of Cane
5					B heavy	120 -150 Ltrs/MT of cane	210-240 Ltrs/MT of cane
6					Syrup and B-heavy	120 -150 Ltrs/MT of cane	190-220 Ltrs/MT of cane
7			Back pressure turbine	S2B	C heavy	60-70 Ltrs/MT of cane	230-260 Ltr/MT of Cane
8					B heavy	60-70 Ltrs/MT of cane	250-280 Ltrs/MT of cane
9					Syrup and B-heavy	60-70 Ltrs/MT of cane	240-270 Ltrs/MT of cane
10		Sugar backend refinery with low pressure boiler	Back pressure turbine	R1	C heavy	70-80 Ltrs/MT of cane	220-250 Ltrs/MT of cane
11					B heavy	70-80 Ltrs/MT of cane	240-270 Ltrs/MT of cane
12					Syrup and B-heavy	70-80 Ltrs/MT of cane	220-250 Ltrs/MT of cane
13		Sugar backend refinery with high pressure boiler	Condensing mode turbine	R2A	C heavy	120 -150 Ltrs/MT of cane	180-210 Ltr/MT of Cane
14					B heavy	120 -150 Ltrs/MT of cane	190-220 Ltrs/MT of cane
15					Syrup and B-heavy	120 -150 Ltrs/MT of cane	185-215 Ltrs/MT of cane

S. N.	Category	Sub-category	Type of turbine	Category code	Type of molasses	Fresh water consumption	Final Discharge (including spray pond overflow)
16			Back pressure turbine	R2B	C heavy	70-80 Ltrs/MT of cane	220-250 Ltrs/MT of cane
17					B heavy	70-80 Ltrs/MT of cane	240-270 Ltrs/MT of cane
18					Syrup and B-heavy	70-80 Ltrs/MT of cane	220-250 Ltrs/MT of cane
19	Integrated Sugar mills with Distillery units	Sugar mill Sulphitation with low pressure boiler integrated with distillery	Back pressure turbine	I1	C heavy	60-70 Ltrs/MT of cane	170-200 Ltrs/MT of cane
20					B heavy	60-70 Ltrs/MT of cane	190-220 Ltrs/MT of cane
21					Syrup and B-heavy	60-70 Ltrs/MT of cane	175-200 Ltrs/MT of cane
22		Sugar mill Sulphitation with high pressure boiler units with co-generation and integrated with distillery	Back pressure turbine	I2A	C heavy	60-70 Ltrs/MT of cane	170-200 Ltrs/MT of cane
23					B heavy	60-70 Ltrs/MT of cane	190- 220 Ltrs/MT of cane
24					Syrup and B-heavy	60-70 Ltrs/MT of cane	175-200 Ltrs/MT of cane
25			Condensing mode turbine	I2B	C heavy	120 -150 Ltrs/MT of cane	120-150 Ltr/MT of Cane
26					B heavy	120 -150 Ltrs/MT of cane	130-160 Ltrs/MT of cane
27					Syrup and B-heavy	120 -150 Ltrs/MT of cane	125-155 Ltrs/MT of cane

3.1.2 High quantum of effluent generation

Sugar industry is a water surplus industry as sugarcane contains 70% of water. As tabulated in Table 3 above after considering losses total wastewater discharge including balance excess condensate, cold water effluent and spray pond overflow amounts to 170-280 lit/ton (in case of low pressure boiler) and 120-270 lit/ton (in case of high pressure boiler). The detailed water balance is given in Appendix 8.4. Therefore, it produces high quantum of effluent which can be treated and reused in various unit operations. Additionally, cleaning operations viz. washing of mill house floor, various division of boiling house like clarifications, evaporators, vacuum pans, centrifugation etc. generate huge volume of waste water. Periodical cleaning of heat exchangers, evaporators & regeneration of IER column with NaOH, NaCl, HCl, Sulphamic acid etc. to remove the scale from the tube surfaces and regenerate the resin in their original form which contributes organic and inorganic pollutant loading to waste water treatment plants. Leakages from pumps, pipelines, centrifugal section also contribute to waste water produced. Effluent is also produced from boiler blow down, spray pond overflow and from condenser cooling water which is discharged as waste water when it gets contaminated with cane juice or molasses.

As per the notified discharge norms for Sugar industry, final wastewater discharge limit is notified as 200 litre per tonne of cane crushed (final treated effluent discharge restricted to 100 litre per tonne of cane crushed and waste water from spray pond overflow or cooling tower blow down to be restricted to 100 litre per tonne of cane crushed).

In sugar industries quantity of effluent generation is not uniform. Variation in final effluent discharge quantity in different categories of sugar industries is tabulated in above table 3.

The following factors affects the effluent discharge quantity:

a) Difference in treated water reuse opportunity because of different plant configuration

i. **Standalone with low pressure boiler:**

- After initial fill no fresh water is required. The treated condensate is used for auxiliary cooling towers, boiler feed and process cold water UGR makeup. No fresh water for cooling tower makeup and boiler feed is needed.

- Even after that, the final effluent discharge could be in the range of 230-280 L/T of cane crushed.

ii. Sugar with cogeneration having high pressure boiler operating on condensing mode turbine:

- High-pressure boilers are more suitable to larger industries with higher energy requirements and a focus on maximizing electricity generation for internal use and revenue generation through power export.
- In case of high pressure boiler with operating on condensing mode turbine, sugar industries need additional fresh water as makeup water for cooling tower because of increased cogeneration capacity. Hence, the reuse capacity of treated condensate is increased. However, final effluent discharge comes in the range of 210-240 L/T of cane crushed with the utilization of treated condensate.
- In the other case where the high pressure boilers are operated with back pressure turbines, there is no cooling tower for power plant and hence the reuse opportunity decreases and in that case the effluent discharge comes in range of 240-280 Ltr/MT of cane.

iii. Presence of cooling tower or Spray Pond

Cooling towers and spray ponds are both cooling mechanisms used in industrial processes to dissipate heat from various sources. They consume water through evaporation and may emit plumes of water vapour and hence the drift loss of water from cooling tower is slightly higher as compared to spray pond. Spray ponds can have less loss of water as they do not consume water for cooling as significantly as cooling towers. Cooling towers are slightly more efficient for cooling applications however with capacity and good quality of nozzles spray ponds are also serving the purpose. Spray pond require large area approximately 25-50 times the area of cooling tower. In terms of excess condensate reuse, cooling tower has more opportunity than spray due to requirement of makeup water. However, cooling tower carry over losses which are 0.2-0.6 % of water flow, causes corrosion of blades, forms the fog around tower with increase in carry over losses make up water required is also increased.

In different categories of sugar industries with high or low pressure boiler having different mode of turbine operation, the range of cooling tower blow

down estimated as 72 L/T to 130 L/T of cane crushed and spray pond overflow generation is up to 500 L/T of cane crushed. Both cooling tower blow down and spray pond overflow contributes in total effluent generation quantity in sugar industries.

Spray Pond Cooling System

The spray pond cooling is the one of the simplest method of cooling the condenser water. In spray pond warm water is broken up into a spray by means of nozzles.

Advantages: a) Pumping cost is low b) Head required is less c) Lesser wastage of water d) Low drift losses e) Least choking f) Easy to maintain g) High Durability and long life

Disadvantages: a) Large area is required. Approximately 25-50 times the area of cooling tower b) Spray losses due to evaporation and windage losses c) There is no control over the temperature of cooled water e) Cooling efficiency is low f) Cooling effect reduces with reduced wind velocity g) When load on the plant increases it does not respond to change

Cooling Tower

The cooling tower are desired when positive control on the temperature of water is required, the space occupied by the cooling system is considerable factor and the plant is situated near the load centre.

Higher the surface area, more time of exposure, lower relative humidity, and higher difference between WBT of air and water inlet temperature and cross flow gives effective cooling and reduced the tower size.

The cooling tower are mainly divided into two groups as Natural draft or Atmospheric cooling tower and Mechanical draft tower as per the air flow through the tower.

Advantages: a) Less floor space area required b) Induced draft design with fan motor c) More efficient compare to spray ponds

Disadvantages: a) The carry over losses which are 0.2-0.6 % of water flow, causes corrosion of blades forms the fog around tower with increase in carry over losses make up water required is also increased b) The drift droplets have

the same chemical impurities as the circulating water and the deposition of these chemicals on object causes potential environmental concern c) Cooling tower where sewage effluent is uses for making up is highly conductive for growth of algae d) More maintenance

Conclusion:

The choice between a cooling tower and a spray pond depends on factors such as space availability, efficiency requirements, and operational preferences. Cooling towers are generally slightly more efficient for cooling applications however with capacity and good quality of nozzles spray ponds are also serving the purpose.

iv. Integrated sugar industries with distilleries:

- With any of the previous two case, if there is a distillery installed, there will always be an opportunity for use of treated condensate in distillery cooling towers /fermenters.
- Due to increase in reuse opportunity, as about 60 lit/tonne of treated effluent being recycled in case of integrated sugar industries the final effluent discharge quantity is less in comparison to standalone sugar industries and sugar refineries. For instance, integrated sugar industries having low pressure boiler is in the range of 170-220 L/T of cane crushed. However, in case of integrated sugar mills where high pressure boilers are operated on condensing mode turbine the final discharge quantity falls in the range of 120-160 L/T of cane crushed.

b) Type of molasses diversion:

Molasses, the residual syrup after sugar crystallization, is a valuable by-product which is used by distillery for production of ethanol, ENA, IMFL and country liquor. Two type of molasses generates as by-products from the process i.e. C –Heavy (final molasses) and B- Heavy. On the basis of basic consideration of the production of C Heavy molasses ranges between 4 - 5% on cane and B Heavy ranges from 6-7 % on cane. With the introduction of sugar syrup for ethanol production in Ethanol Blending Policy (EBP) by Government of India, there is rising trend in sugar industries diverting upto 30% sugar syrup to distilleries.

With B-Heavy diversion the vapour load at condensing system reduces resulting lesser heat load at cooling tower hence lesser water loss. In standalone sugar industries

operating with low pressure boiler, the variation in excess condensate generation increases to 20% on cane in case of B-Heavy molasses diversion, however, the same is about 14% on cane in case of C-Heavy diversion. Whereas, in the sugar industries operating with high pressure boiler, the excess condensate generation is in the range of 12% to 14.5% on cane depending of the type of molasses diversion.

c) **Sugarcane variety and varying weather conditions during crushing season (November to April)**

- Percent fibre of the early varieties (viz. CoLk 11203, CoLk 9709, Co 0238 etc.) was 12.5% to 14.91 % on cane (dry basis) from October to April and it increased by an average of 2.44 units till April in all the varieties. In late maturing varieties (CoLk 11206, CoLk 9204, Co Pant 12226 etc.) the percentage fibre was 12.8% to 15.29% on cane (dry basis) from October to April and increased by 2.47 units till April [*Reference- Priyanka Singh, M.M. Singh, Jyotsendra Singh (2021). "Suitable Sugarcane Varieties For Sustainable Sugar Recovery in Conditions of Subtropical India" (published in E-proceedings of 79th annual convention of STAI: 70-76)*].
- Seasonal variation in effluent discharge quantity with different reuse opportunities is tabulated in table 4 & 5 below:

Table 4. Indicative trend of Effluent generation (With Zero fresh water consumption for process) in the case where reuse opportunity is least

Months	**Treated Effluent Generation (L /T of cane)**	**Comments**
November, December & January	240-260	Period of lower juice brix, higher water input and lesser loss of water in bagasse because of low bagasse % cane.
February	200-210	Period of improved juice brix, comparatively lower water input and higher loss of water in bagasse.
March and April	160-170	Period of higher juice brix lower water input and higher loss of water in bagasse & at spray pond / cooling tower due to higher ambient temp.
Season Average	200-210	

Table 5. Indicative trend of Effluent generation (With Zero fresh water consumption for process) in the case where there is opportunity of reuse in the cooling tower of power plants

Months	Treated Effluent Generation (L/T of cane)	Comments
November, December & January	200-220	Period of lower juice brix, higher water input and lesser loss of water in bagasse because of low bagasse % cane.
February	160-170	Period of improved juice brix, comparatively lower water input and higher loss of water in bagasse.
March and April	120-130	Period of higher juice brix lower water input and higher loss of water in bagasse & at spray pond / cooling tower due to higher ambient temp.
Season Average	160-175	

3.1.3 Poor performance of ETP and non-compliance with effluent discharge norms

It has been observed that many units have provided adequate retention time of around 24 hr. in the aeration tank, however the reduction in the organic load in terms of BOD/COD are very less (60-80%) than the desirable (BOD reduction 85-95%) in secondary biological treatment despite maintaining the satisfactory MLSS level in aeration tank. The probable main reason behind this issue is the shallow depth (2.5-3.5 m) of aeration tank (initially designed for surface aeration) against the desirable depth of minimum 4.5 meter which is required to achieve Standard O_2 Transfer Efficiency up to 20 % requisite in case of diffused aeration system. Most of the sugar industries has been shifted to the diffused aeration system over surface aerator to maintain requisite DO level in aeration basin. As the depth (submergence) of aeration system decreased oxygen transfer efficiency of aeration system also decrease proportionally. Thus, such types of aeration system shall be upgraded as per requirement.

Central Pollution Control Board authorized Third Party Technical Institute i.e. VSI, Pune and NSI, Kanpur carried out inspections of the sugar industries annually to verify the compliance status of the sugar industries. During the inspection, it was observed that instead of treating the effluent in ETP some sugar industries were found bypassing

the ETP and directly discharging untreated effluent into the drain/surface water bodies which is a potential hazard to the environment.

CPCB has inspected total 77 sugar industries during 2023-24 in Uttar Pradesh to verify the compliance status, wherein 67 industries were found operational.

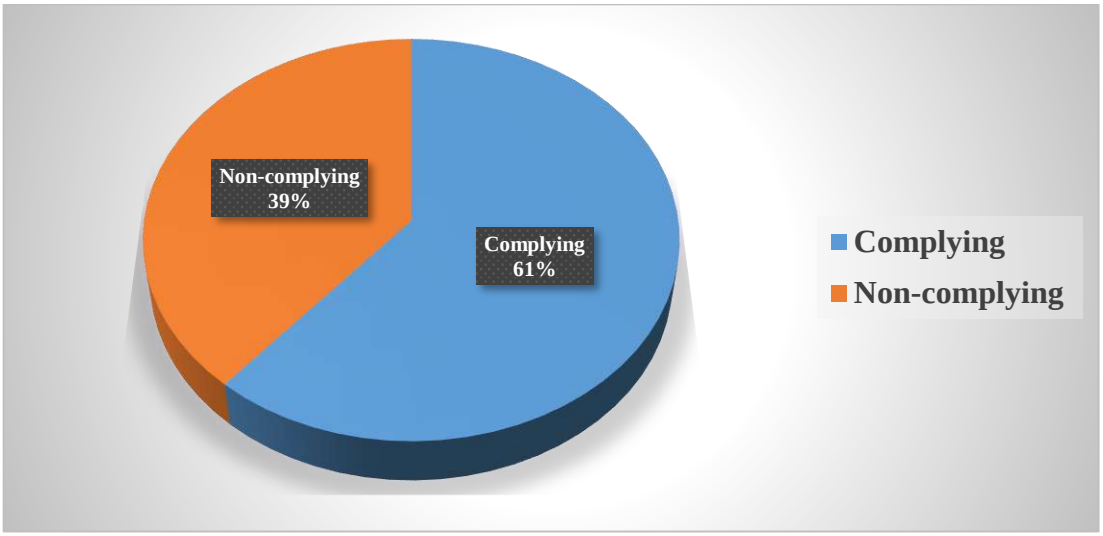


Figure 1. Compliance status of 77 sugar industries in crushing season 2023-24

Out of 67 sugar industries, 41 were found complying and 26 were found non-complying w.r.t. the pH, BOD, COD, TSS, TDS and Oil & Grease and also suspected dilution. The range of exceedance for various parameters is as follows:

Table 6. Range of exceedance of chemical parameters

S. N.	Parameter	Exceedance Range
1.	BOD	35 mg/l to 107 mg/l
2.	COD	263 mg/l to 874 mg/l
3.	TSS	31.3 mg/l to 207 mg/l
4.	TDS	2176 mg/l to 3004 mg/l
5.	O&G	39 mg/l
Out of 26 non-complying units, 06 were non-complying w.r.t. the suspected dilution in the effluent.		

Therefore, there is need for augmentation of ETP to ensure better and consistent compliance with notified discharge norms.

3.1.4 ETP under capacity

Successful implementation of Charter 1.0 has led to upgradation of ETPs up to tertiary treatment level to achieve the notified discharge norms. During 2018-19, sugar industries carried out adequacy of effluent treatment plants by technical institutes. It has been observed that the adequacy was done by taking effluent generation as 200 L/T of cane crushed (notified norms) rather than carrying out the adequacy on actual effluent generation quantity. As described in above paras, actual generation quantity depends on various factors and it may exceed 200 L/T of cane crushed depending upon the plant configuration. Therefore, there is need to carry out augmentation/upgradation of the ETPs of sugar industries located in Ganga basin based on actual effluent generation quantity (after internal recycling/recirculation).

3.1.5 ETP Sludge management

ETP sludge (biological) generation rate is about 20% of the COD load in effluent at ETP inlet. However, it is observed that estimated sludge generation usually not found in-line with the logbook record maintained by industries. So, there is a need of proper record keeping and disposal system to ensure environmentally safe disposal of ETP sludge. Typically, in sugar industries, sludge generation is around 0.2-0.5% of ETP feed. In case of anaerobic filter, the sludge generation is very less.

3.1.6 Brine reject Management

For de-colorization of the sugar melt, use of Ion Exchange Resins (IER) is made. Desorption of the colorants from the exhausted resins is achieved using alkaline sodium chloride solution. Periodical cleaning of heat exchangers, evaporators & regeneration of IER column with NaOH, NaCl, HCl, Sulphamic acid etc. to remove the scale from the tube surfaces and regenerate the resin in their original form results in organic and inorganic pollutant loading to waste water treatment plants. Considerable amount of effluent is generated during the back wash and re-charging of the Ion Exchange Column. The regeneration waste poses a disposal problem, due to its high salinity and BOD. In the sugar refineries having Ion Exchange process for de-colorization of the sugar melt, the brine recovery system holds great significance. The process of brine recovery system is based on single or double stage nano-filtration for recovery of the brine and to reuse it to regenerate ion-exchange resin and it is envisaged that such system can recover brine to the extent of 85%. The spent brine generates @ 1-2% of cane crushed out of this 85-90% volumetric quantity is recovered and reused and about

0.2-0.3% remains as reject brine which is to be disposed. Disposal of brine reject from Brine Recovery System is an issue.

Typically, characteristics of Brine reject are as tabulated below:

Table 7. BRS characteristics

S. No.	Parameters	Observed Values
1.	pH	8.0-9.0
2.	BOD (mg/l)	3500-4000
3.	COD (mg/l)	15000-25000
4.	TSS (mg/l)	2000-3000
5.	TDS (mg/l)	35000-40000
6.	Salt	20000-25000

3.1.7 Non-compliance w.r.t. stack emission norms

A sugar industry can potentially generate significant amount of air pollution. The emission mainly consists of fine particulate matter and smoke due to incomplete combustion of fuel along with NOx and SOx as potential pollutants. Besides, juice clarification, evaporation and sugar dust in drier house are other emission sources that causes air pollution. Non-compliances w.r.t. the emission norms were observed by the sugar industries during inspections carried out under the Hon'ble NGT orders. As per the notified norms, the prescribed value of particulate matter emissions from the stack shall be less than 150 mg/Nm3 (As per MoEFCC notification G.S.R. 373(E) dated 16 May 2023 PM emission std. 250 mg/Nm3 for agro based fuel used in boilers > 10 TPH). Also, the sugar industries located in districts viz. Meerut, Muzaffarnagar, Moradabad, Ghaziabad, Hapur, Sonepat, Panipat, Karnal etc. covered under National Capital Region (NCR), has to ensure emission parameters as per Commission for Air Quality Management i.e. 80 mg/nm^3 in NCR and adjoining areas. Twenty-eight sugar industries are located in NCR, therefore installation and proper operation of adequate Air Pollution Control Device (APCD) is of utmost importance in order to achieve the stringent emission norms.

3.1.8 Untrained and inadequate Manpower

During inspections of sugar industries, it has been observed that the ETP operations are managed by one or two untrained persons, who are not well versed with the technical aspects of various treatment units of ETP. The working of the Effluent Treatment Plant

and Water Management System should be monitored by trained and qualified personnel (having manager level position), assisted by the skilled staff with operation & maintenance of ETP and analytical chemists to carry out the daily analysis of ETP inlet & outlet parameters including performance of each ETP units for the efficient working of the ETP unit operations.

3.1.9 Storage and handling of press mud

Press mud, also known as filter cake or press cake, is a residual by product in the sugar industry. Sugar industries generate press mud @4 % of cane crushed. Press mud contains all solid impurities from converting sugarcane juice to raw sugar under elevated temperature, including residual soil, phosphate precipitates, calcium oxalate/aconitate, sucrose and fibre. At present, there is no regulations or SOP for the proper handling and storage of the press mud. The press mud has the potential to be used as a biofuel, microbial carrier, soil conditioner, bioremediation of heavy metals, animal feed, wax production, and concrete formation.

3.1.10 Handling and disposal of boiler ash and fly ash

In sugar industries bagasse is used as fuel for boiler for steam generation. Bagasse generation is approx. 28-32% of cane crushed. Steam requirement varies with the configuration of the industry. Steam consumption in case of C-heavy molasses diversion is in the range of 32-52% on cane, in case of B-heavy molasses it is in the range of 30-50% on cane and with 25% syrup and B-heavy diversion it is in the range of 30-45%. Daily fuel requirement is estimated based on steam generation @ 2.2-2.4MT steam/MT of bagasse. Boiler ash generated @1.5% to 2%.

Regarding handling and disposal of ash, public complaints and court matters are regularly being reported as the general practice of the ash disposal adopted by the sugar industries are not scientific. Mostly, it has been observed that, hot ash is disposed in open area without prior cooling and accidental burning incidents are also being reported. Also, there is no record keeping regarding the ash generation and disposal quantity. A significant gap has been observed in estimated and actual ash generation. There is no SOP available for the safe & scientific disposal and utilization of ash generated from Sugar industries.

4. STAKEHOLDER CONSULTATION FOR FORMULATION OF CHARTER 2.0

To address the above-mentioned issues and to endorse the culture of consistent betterment, consultative meetings on "emerging issues in the sugar industry and to discuss the charter 2.0", which were held on 01.06.2023, 29.03.2024, 11.05.2024, 03.06.24 and 13.06.24 with different stakeholders like VSI, NSI, experts from industry and technology providers for setting up of new benchmarks and technological intervention for overall improvement in environmental status and to ensure better and consistent compliance of norms by sugar industries. Experts/participants advocated for revision of the existing Charter with more focus on resource conservation in terms of reduction in specific freshwater consumption rather than focusing on ensuring compliance to effluent discharge volume as the achievability of discharge norms of 200 L/T of cane crushed is not feasible during entire crushing season. Effluent discharge quantity is affected by various factors viz. difference in treated water reuse opportunity because of different plant configuration i.e. standalone with low pressure boiler, sugar with co-generation having high pressure boiler operating on condensing mode turbine, high pressure boilers with back pressure turbines integrated sugar industries with distilleries, type of molasses diversion, sugarcane variety and varying weather conditions during crushing season (November to April). The detailed explanation is given in para 3.1.2. As evident in Table 3 effluent discharge quantity varies between 180-350 L/T of cane crushed depending upon the type of boiler and turbine mode operation after considering losses total wastewater generation including balance excess condensate, cold water effluent and spray pond overflow. Also, due to current policy of Government regarding rates for power export to sugar industries, it has been observed that most of the industries has stopped co-generation for surplus power production thus, affecting the condensate generation quantity.

Therefore, achieving the notified discharge norm of 200 L/T of cane during entire crushing season in all type of sugar industries is not feasible.

Therefore, the charter needs to be updated in order to develop a more holistic and comprehensive version.

5. CHARTER 2.0- SUGGESTIVE NORMS, GUIDELINES & ACTION POINTS

5.1 Basic estimates in sugar manufacturing process

Table 8. Typical range of particulars in sugar manufacturing process

S. No.	Particulars	Typical Range
1.	Capacity of Sugar plant (TCD)	2500 - 20000
2.	Recovery (Sugar)	9 – 13%
3.	Bagasse % cane	26 - 32%
4.	Moisture % Bagasse	47.5 - 52%
5.	Filter cake % cane	3.5 - 5%
6.	Moisture % Filter cake	70 -72%
7.	B Heavy molasses % cane	6 - 7%
8.	C Heavy molasses % cane (Final Molasses)	4 - 5%
9.	Steam Consumption % Cane (C Molasses)	32 - 52%
10.	Steam Consumption % Cane (B Molasses)	30- 50%
11.	Steam Consumption % Cane (25% Syrup + B H Molasses)	30 - 45%
12.	Water in cane in the month of Nov. To Feb.	Around 72%
13.	Water in cane in the month of March. To Mayonwards.	Around 68%
14.	Hot excess condensate generation (% on cane)	10 - 20%
15.	Imbibition % cane	28 – 50 %
16.	Mixed juice % cane	100 - 120%
17.	Spray pond overflow generation (Including excesscondensate left after miscellaneous usage)	100 – 160 lit/Ton of cane
18.	Plant Effluent	80 – 120 L/T of Cane
19.	Total waste water generation including balance	• 180 – 280 L/T of cane (In case- Low Pressure

	excess condensate, cold water effluent & spray pond overflow.	Boiler) • 300- 350 L/T of cane (In case- High Pressure Boiler)

- ETP sludge (biological, on dry basis) generation rate as 20% of the COD load in raw effluent at ETP inlet i.e. 0.2-0.3% on dry basis.
- Ash generation rate as 1.5% - 2% on bagasse consumption
- Daily fuel requirement is estimated based on steam generation @ 2.2-2.4 MT steam/MT of bagasse.
- Brine reject generates @ 0.2-0.3% of cane crushed.

5.2 Rationale for setting up of specific freshwater consumption targets

During the meeting held under the chairmanship of Hon'ble Minister of Environment, Forest and Climate Change (MoEF&CC) and Hon'ble Minister Jal Shakti (MoJS) on 9th July, 2020; CPCB and CGWB were directed to verify the consumption of groundwater by industries and accordingly the permission should be granted for abstraction. Further, during the meeting taken by Secretary, MoEF&CC and Secretary, MoJS on 30th November, 2022 it was decided to cap groundwater withdrawal based on charter norms/average specific freshwater consumption by grossly polluting industries (GPIs). Thereafter, during meeting held on 16th December, 2023 in CPCB with technical institutes, NMCG and SPCBs it was decided to develop a SOP for integrated sugar and distillery units for freshwater conservation and in sugar mills instead of effluent discharge norms, freshwater consumption norms shall be enforced for water conservation.

As already explained, in sugar industries there is water input from cane which is approx. 690-710 L/T of cane, out of this water only 150-180 L/T of cane water is consumed in the sugar manufacturing process. During the sugar manufacturing process, approx. 180-260 L/T of cane water evaporates from cooling towers, which depends upon the process (sulphitation or refinery) as well as molasses diversion route (C heavy /B heavy/ Syrup diversion), Weather condition (Ambient Temp and Humidity). The total quantum of water loss during the process falls in the range of 330-440 L/T of cane. Consequently, the balance water from cane remains in the range of 270-360 L/T of cane which primarily comes out from three routes:

- Plant Effluent

- Spray Pond /Cooling Tower overflow
- Excess condensate (Balance after possible reuse /recycle)

The detailed explanation regarding the actual requirement of freshwater in sugar industries is mentioned in para 3.1.1 and factors affecting final effluent discharge quantity is mentioned in para 3.1.2. It is evident from table 3 where freshwater consumption and final effluent discharge quantity in different categories of sugar industries is tabulated that the final effluent discharge is in the range 120-280 L/T of cane crushed and vis a vis freshwater consumption is only 60-150 L/T of cane crushed. This scenario clearly indicates that there is a need to focus on setting norms for specific freshwater consumption rather than effluent discharge as sugar industry is a water surplus industry where the water is coming in the system from raw material. Fixing the norms for freshwater will result in resource conservation by saving groundwater/surface water and benefit the ambient environment whereas, fixing the specific effluent discharge norms will be of no help to ambient environment in any manner.

5.3 Targets for specific freshwater consumption for different categories of sugar industries

CPCB considered all the above mentioned factors affecting effluent discharge and suggestions emerged during discussions held with stakeholders regarding the fresh water consumption in different categories of sugar industries, and accordingly, with the focus on conservation of freshwater new proposed targets for the specific fresh water consumption are given in Table 9 below:

Table 9. New proposed norms for fresh water consumption in different categories of sugar industries

S. No.	Category	Sub-category	Type of Turbine	Category Code	New Proposed Norms for Specific Fresh Water Consumption (L/T)	
					Short Term (before crushing season 2025-26)	Long term (before crushing season 2028-29)
1.	Standalone (S)	Sugar mill Sulphitation and low pressure boiler	Back pressure turbine	S1	50	30

S. No.	Category	Sub-category	Type of Turbine	Category Code	New Proposed Norms for Specific Fresh Water Consumption (L/T)	
					Short Term (before crushing season 2025-26)	Long term (before crushing season 2028-29)
		Sugar mill Sulphitation and high pressure boiler	Condensing mode turbine	S2A	100*	60*
			Back pressure turbine	S2B	75	50
2.	Sugar backend refinery (R)	Sugar backend refinery with low pressure boiler	Back pressure	R1	50	30
		Sugar backend refinery with high pressure boiler	Condensing mode turbine	R2A	100*	60*
			Back pressure turbine	R2B	75	50
3.	Integrated Sugar mills with Distillery units	Sugar mill Sulphitation with low pressure boiler integrated with distillery	Back pressure turbine	I1	50	30
		Sugar mill Sulphitation with high pressure boiler units with co-generation and integrated with distillery	Condensing mode turbine	I2A	100*	60*
			Back pressure turbine	I2B	75	50

***Note-**

-In case of sugar industries with cogeneration, it is presumed that power export is only upto 50% of home load.

- For every 25% increase in power export, additional 25% specific fresh water

consumption shall be permitted.

(For example, if any industry is generating 20MW of power and home load is 10MW. Then, upto 5MW power export new norm of specific fresh water consumption i.e. 100 L/T of cane crushed shall be applicable. However, since industry is exporting 10MW of power which is 100% of home load, therefore considering additional 25% specific fresh water consumption for every 25% increase in power export, the additional specific freshwater consumption of 50 L/T of cane crushed shall be allowed i.e. specific freshwater consumption permissible will be 100+50=150L/T of cane crushed).

Fresh water norms are applicable for industrial consumption, only, however industries need to install separate flow meters on lines carrying freshwater to industrial processes and domestic consumption, and maintain logbooks for the same.

5.3.1 SOP for assessment of specific fresh water consumption:

Objective: To establish a systematic procedure for monitoring and recording fresh water consumption in the sugar mill, ensuring efficient use of water resources and compliance with regulatory requirements.

Scope: This SOP applies to all personnel involved in water management and operations within the sugar mill premises.

Responsibilities:

Water Management Team:

a. Track daily water usage of fresh water and keep precise records of the data.
b. Investigate and report any abnormalities in water consumption
c. Adhere to the conditions issued by the respective authorities regarding freshwater usage

Procedure:

1. Installation of Flow meters

a. Borewell(s)/ Tubewell(s) to be provided as per the No Objection Certificate (NOC) issued by the concerned authority (Central Ground Water Authority/ State Ground Water Department). Type of well, depth of the well, type of the pump, H.P. of the pump, rate of withdrawal (m^3/hr) and maximum allowable running hours per day etc. to be as per the NOC issued in the matter.
b. Sugar factories to provide digital electromagnetic type flow meter(s) (conforming to BIS/ IS standards) of adequate capacity having rate of extraction and totalizer facility at each Borewell/ Tubewell as per CGWA notification in Appendix 8.8). The link for the CGWA notification is: **https://cgwanoc.gov.in/landingpage/UserAssistance/Final%20Specificati**

on%20of%20Digital%20Water%20Flow%20meter%20with%20Telemetry%20System.pdf.

The telemetry flow meter installed in the industry shall ensure compliance with the ISO 4064. The link for this document is: **https://cdn.standards.iteh.ai/samples/55371/c05284af86c24671b477bbef77a85842/ISO-4064-1-2014.pdf**. The factories shall provide separate flow meter(s) with check measurement facility at each Borewell/ Tubewell.

c. Construction of piezometer(s) and installation of digital water level recorders with telemetry shall be mandatory for sugar factories as per the guidelines issued in the matter.

d. Permanent display board(s) should be installed at Piezometer/Tubewell(s) site for providing the location, piezometer/ tubewell number, depth and zone tapped of piezometer/ tubewell for standard referencing and identification.

2. Daily Monitoring:

a. Responsible personnel will record the starting water meter reading for the day.

b. Calculate and record total water consumption periodically (e.g., every 8 hours).

3. Recording Data:

a. Proper recording keeping of water abstraction to be made in the logbooks on day to day basis by the sugar industries (Format for logbook for daily water consumption is provided in Appendix section 8.6).

b. All the flow meters to be connected with on-line Real Time Monitoring System (RTMS) to transmit the data (rate of extraction and totalizer reading) to concerned Ground Water Authority, Central Pollution Control Board (CPCB)/ State Pollution Control Board (SPCB).

4. Investigating Discrepancies:

a. Compare current consumption with historical data and production levels.

b. Investigate any significant deviations from expected water usage.

c. Identify and address potential leaks, overuse, or inefficiencies promptly.

d. Under the normal circumstances, no underground water pipelines shall be used for the purpose.

e. The samples of ground water for different parameters of each Borewell/ Tubewell shall be analyzed twice in a year during pre-monsoon (May/June) and post-monsoon (October/November) periods from any NABL accredited

laboratory authorized by Central/ Sate Government and a record of the same shall be kept.

5. Reporting:

a. Compile daily water consumption data into a weekly/monthly report.
b. Highlight trends, anomalies, or areas for improvement.
c. Submit reports to the designated manager or water management team.
d. The sugar units shall submit every month a consolidated statement about quantity of sugarcane crushed, quantity of fresh water withdrawal, specific fresh water consumption (litre per tonne of cane) etc. to concerned Ground Water Authority, Central Pollution Control Board (CPCB)/ State Pollution Control Board (SPCB) through the prescribed proforma on web portal.

6. Maintenance and Calibration:

a. Regularly inspect and maintain water consumption meters to ensure accuracy.
b. Calibrate meters as per manufacturer's recommendations or regulatory requirements.
c. All the flow meters to be calibrated and sealed by **Department of Legal Metrology** (Weights and Measures) before start of every sugar crushing season.

7. Water Conservation Measures and tanning:

a. Implement water-saving initiatives and best practices (e.g., reuse of condensate, optimizing process water usage and maintain separate record for the same).
b. Train personnel on efficient water management practices

8. Compliance:

a. Ensure compliance with local environmental regulations and permits regarding water usage
b. Maintain records as required by regulatory authorities.

9. Emergency Procedures:

a. In case of a water leak or spill, notify the water management team immediately take necessary steps to contain the leak and minimize water loss

10. Documentation:

a. Keep all records of water meter readings, consumption reports, and maintenance logs organized and accessible for audits or reviews

5.4 Discharge norms

Sugar industries generate high quantum of effluent, even after considering losses total wastewater generation including balance excess condensate, cold water effluent and spray pond overflow amounts to 230-260 lit/ton (in case of low pressure boiler) and 300-350 lit/ton (in case of high pressure boiler). Effluent is having high BOD 700-1200 mg/l, COD 1500-2500 mg/l, which after treatment in ETP is being discharged either in surface water bodies or on land for irrigation purpose. It is pertinent to mention here that need for stringent norms has also been highlighted. During the meeting taken by Secretary, MoEF&CC and Secretary, MoJS on 30th November, 2022 it was directed that standards for industrial effluents to be made more stringent similar to what is being proposed for STPs. Also, during the meeting held on 16th December, 2023 in CPCB with technical institutes, NMCG and SPCBs it was emphasized to undertake studies for consistent compliance of industries on the basis of stringent discharge norms so that their operations do not affect mass bathing during special occasions like Magh Mela and Kumbh Mela.

Considering the fact that, since 2015 as per charter for Pulp & Paper industries the existing norms for BOD <20 mg/l, COD – 150 mg/l and TDS- 1600 mg/l, respectively. Also, in reference to the norms prescribed by Hon'ble NGT in the order dated April 30, 2019, concerning OA no. 1069/2018, stringent norms are applied for compliance verification of effluent discharged from STPs. These standards specify BOD less than 10 mg/l, TSS less than 20 mg/l and COD less than 50 mg/l for compliance when discharging into ponds and lakes. Similarly, vide notification dated 10.09.2021 stringent BOD norms of 20 mg/l was prescribed for tannery industries.

Annual inspections data reflects that most of the sugar industries are already achieving the BOD concentration <30 mg/l. The performance assessment of sugar industries w.r.t BOD concentration is tabulated in table 10 below:

Table 10. Performance assessment w.r.t. BOD

Type of Sugar Industry	BOD Range (mg/l)	Performance	No. of Units
Standalone	<20	Best	7
	20 to 30	Average	22
	>30	Below average	2
Sugar with cogeneration	<20	Best	5
	20 to 30	Average	31

	>30	Below average	1
Sugar refinery	<20	Best	2
	20 to 30	Average	6
	>30	Below average	-
Refiner with cogeneration	<20	Best	7
	20 to 30	Average	12
	>30	Below average	-

Considering the above facts, since most of the mills in all categories are already discharging treated effluent with BOD < 20 mg/l. Hence, it is suggested that efforts should be made to achieve more stringent discharge norms as compared to notified norms. It is even more substantial considering that the treated effluent from sugar industries is intensively being used for agricultural purpose by method of flood irrigation or discharged into surface water bodies where availability of water for dilution is limited. Since in other sectors stringent norms are being applied therefore to ensure better and consistent compliance stringent norm for BOD <30 mg/l is desirable. It is pertinent to highlight that designing of the ETP could only be made for single outlet parameter only therefore norms of 100 mg/l at ETP outlet does not hold any significance. However, new target for treated effluent discharge quality is given as under:

Table 11. New target for treated effluent discharge quality.

Industry	**Parameters**	**Standards (*All concentration values are in milligramme per litre except for pH*)**
Sugar Industry	pH	5.5 – 8.5
	Total Suspended Solids (TSS)	30
	Biological Oxygen Demand, BOD (3 days at 27°C)	30
	Oil & Grease,	10
	Total Dissolved Solids (TDS)	2100

5.5 Upgradation / Augmentation of effluent management systems

It has been observed that mostly sugar industries have installed conventional ETP system consisting of pH correction tank, primary clarifier, secondary biological

treatment followed by tertiary filtration system (MGF & ACF) for treatment of effluent generated in mill house and spray pond overflow. Treated effluent is being either used for irrigation purposes or discharged outside.

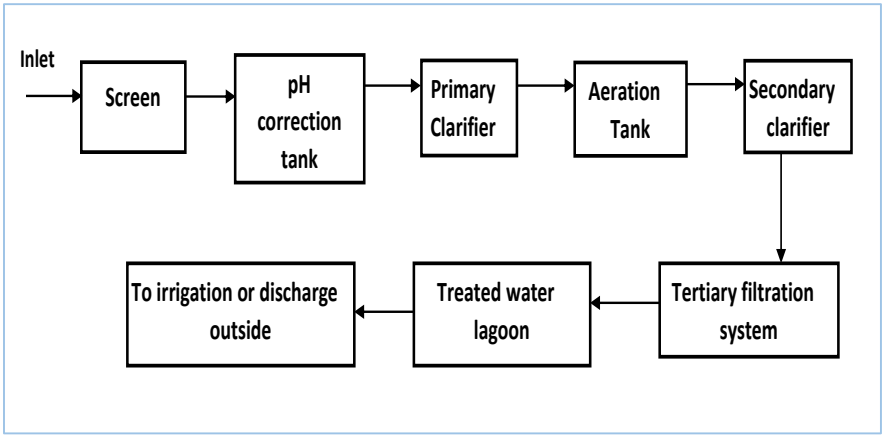


Figure 2. Existing typical Effluent treatment plants scheme

As explained above in Para 3.1.3 & 3.1.4, existing ETPs installed in some of the sugar industries are not complying with notified norms and their design adequacy was carried out considering effluent discharge quantity as 200L/T of cane crushed. However, with above mentioned details in Para 3.1.1 & 3.1.2 achievability of effluent discharge norm of 200L/T during entire crushing season with different plant configurations seems difficult. Therefore, it is necessary for carrying out fresh adequacy and performance assessment of ETPs based on actual final effluent generation quantity after internal circulation. However, no need to carry out fresh adequacy, if ETP adequacy report for the crushing season 2022-23 or 2023-24 is available. Fresh adequacy is required only in the case where the production capacity is enhanced or the treatment technology in ETP is changed.

Existing capacity of ETPs installed in sugar industries would not be sufficient to treat the actual effluent generation quantity, hence to treat the high quantum of effluent generation sugar industries need to go for capacity expansion to ensure the treatment of effluent up to the prescribed discharge norms. Capacity expansion will also lead to augmentation and upgradation of ETPs for ensuring consistent and better compliance.

In this charter, norms for specific freshwater consumption are being prescribed. Therefore, in order to achieve the specific fresh water consumption norms, the sugar industries have to improve their water use efficiency. Hence, sugar industries shall optimize reuse and recycle of treated effluent and excess condensate in the process,

cooling tower makeup, boiler feed, integrated distilleries etc. after treating it up to the desired extent by installing Condensate Polishing Unit (CPU). Desirable quality for recycling treated condensate after CPU and for reuse of ETP treated water for various purposes are tabulated in Table 12 and 13, respectively.

Table 12. Standard parameters for recycling treated condensate after CPU

S.N.	Parameter	CPU Outlet parameters
1	pH	7.0 – 8.5
2	Temperature (^{0}C)	25 - 30
3	COD (mg/l)	<100
4	BOD (mg/l)	<30
5	TDS (mg/l)	<150

Table 13. Standard parameters for recycling of ETP treated water for various purposes

S.N.	Parameters	Sugar factory (in process)	Co-generation Cooling tower make-up	WTP feed
1	pH	6.5-7.5	6.5-7.5	6.5-7.5
2	COD	<250	<250	< 100
3	BOD	<30	<20	<5
4	SS	<30	<20	<5
5	TDS	<500	<150	<100

Sugar industry may adopt any treatment technology in CPU to meet the CPU outlet norms as stipulated in the Charter 2.0. To achieve the desirable quality for recycling treated condensate and ETP treated water for various purposes the following augmentations and upgradation are suggested in ETPs which will further improve water reuse efficiency resulting in reduction of specific freshwater consumption and compliance with notified discharge norms:

i. Installation of mechanical oil & grease skimmer with adequate retention time according to the technology.

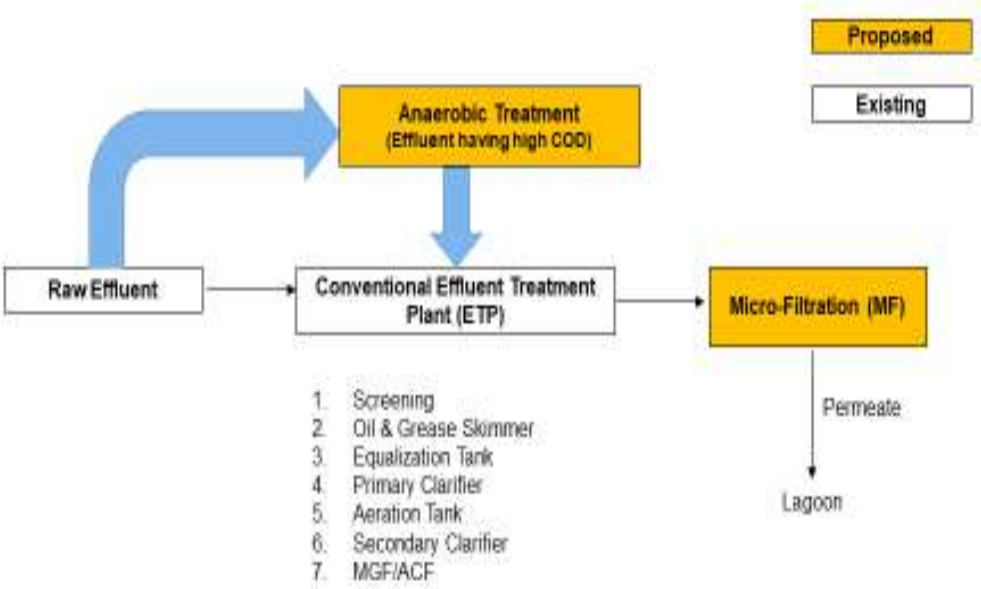
ii. Upgradation/augmentation of existing ETPs by installing two stage Secondary biological treatment (anaerobic-aerobic or two stage extended aeration system in series) and tertiary treatment upto microfiltration (i.e. bag filters/cartridge filters/ceramic filters, etc.).

iii. Installation of Condensate Polishing Units (CPU) where high pressure boiler (greater than or equal to 42 kg/cm2 working pressure) commissioned. Biological treatment is not mandatory at CPU and based on the COD of condensate, treatment with RO membranes can also be done to get the desired quality of the excess condensate for reuse in power plant's cooling towers. On

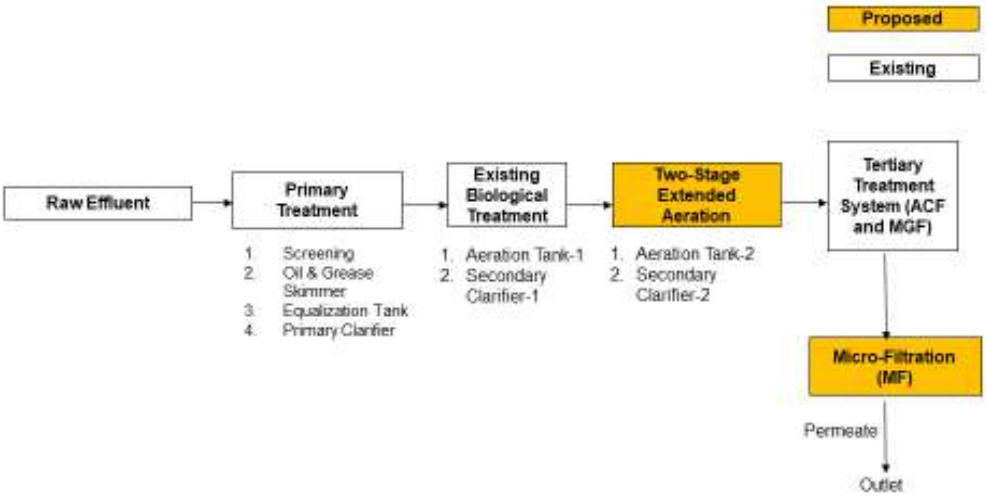
the basis of effluent strength, biological treatment as well as treatment with RO membranes in CPU can be done to get the desired quality of the excess condensate for reuse in power plant's cooling towers. However, industries operating on low-pressure boilers (i.e., boilers with a working pressure of <42 kg/cm²) are exempted from the requirement to install CPUs.

iv. Fresh adequacy of ETP based on actual quantity of effluent generated after internal recirculation.

v. Installation of separate brine recovery system (BRS) towards recovery and reuse of brine solution and to minimize the reject brine quantity. Ensure proper disposal of Brine reject i.e. spraying on bagasse/ burning in incineration boiler /gradual discharge to ETP for treatment etc.



Case 1: Anaerobic followed by aerobic



Case 2: Extended aeration

Figure 3: Proposed Effluent treatment plants scheme

vi. In the first proposed effluent treatment scheme, it is to be considered that COD of Spray Pond/cooling tower overflow and surplus condensate water going to ETP remains in the range of 600-1000 ppm and hence at this capacity there is no need of anaerobic filter, and this water is approx. 70 % of total influent going to ETP. The balance 30 % influent routed through plant drain, COD of this stream remains in the range of 1500-2500 and chances of shock load also remains there. Therefore, the installed capacity of anaerobic filter /digester should be 25-30 % of the total influent only and not for the total influent generated by the unit.

5.5.1 SOP for ETP operations during pre and post crushing season

Since the sugar industries are the seasonal in nature, therefore there is requirement to establish standard operating procedures for the safe and efficient ETP operations as well as stopping of the Effluent Treatment Plant (ETP) to ensure compliance with environmental regulations and operational efficiency. In order to streamline ETP operations during pre and post crushing season a SOP has been developed and same is provided in Appendix section 8.5.

5.6 Treated effluent utilization and irrigation management plan

Sugar industries have different configuration and the range of specific effluent discharge, as tabulated in table 3 varies from 120 to 280 L/T of cane crushed.

After complying with the notified discharge norms, as the treated effluent have inherited properties of the parameters that are required for growth of sugarcane in lower concentration (Nitrate- 36.7 mg/l, Phosphate- 14mg/l, Sulphate- 107 mg/l, Copper-3.12 mg/l, Lead-1.46 mg/l. Cadmium- 2.37 mg/l, Zinc-14.11 mg/l, Mangnese-5.03 mg/l*) [Reference- Usha Damodharan, M. Vikram Reddy (2012) " Impact of Sugar Industrial Treated Effluent on the Growth Factor in Sugarcane-Cuddalore, India", Journal of Sustainable Bioenergy System (Volume-02, pg-43-48)]* and no hazardous chemical is used in the treatment process therefore it is suitable for utilization in irrigation. This will also result in water conservation by reduction in abstraction of fresh water by farmers for irrigation purposes.

To ensure that treated effluent is used in irrigation upto the maximum extent, following measures are recommended:

i. An impermeable/ impervious lagoon shall require to be constructed for storage of treated effluent during no demand period of irrigation, the treated effluent to be stored in a seepage proof lined lagoon having 15 days holding capacity only. However, sugar industries have to maintain the quality of stored treated effluent as tabulated below:

Table 14. Standards for land disposal

Parameters	**Standards (*All concentration values are in milligramme per litre except for pH*)**
pH	5.5 – 8.5
Total Suspended Solids (TSS)	100
Biological Oxygen Demand, BOD (3 days at 27°C)	100
Oil & Grease	10
Total Dissolved Solids (TDS)	2100

ii. Since norms for treated effluent stored in lagoon wr.t. BOD – 100 mg/l & TSS – 100 mg/l therefore the discharge of stored treated effluent from lagoon is permitted only if the industry treats the stored effluent again through ETP in

order to meet the surface discharge norms w.r.t. BOD less than 30 mg/l; TSS less than 30 mg/l.

iii. Install flow meters with totalizer and maintain logbooks for the same for following locations:
   - ETP outlet
   - Feed to lagoon
   - line carrying stored effluent from lagoon to surface water discharge
   - line carrying stored effluent from lagoon to land discharge
   - line carrying stored effluent from lagoon back to ETP

iv. The monitoring of treated effluent quality and periodic cleaning of lagoon may be ensured by the sugar industries to avoid algae/algal bloom formation during storage.

v. Installation of flow meter at lagoon to record the quantity of treated effluent being utilized for irrigation purpose i.e. in-house and agricultural fields.

vi. To utilize the treated effluent in agriculture, the unit shall have the irrigation management plan depending on the irrigation requirement of the crop and soil duly vetted by agricultural universities.

5.7 Management & disposal of solid waste

Suggestive measures for effective handling, disposal, and monitoring solid waste (i.e. boiler ash and ETP sludge) generated by sugar industries:

a. SPCBs to facilitate sugar industries to adopt manifesto system for managing solid waste (i.e. boiler ash and ETP sludge) either through industry association or joint forum with industry association & SPCB.

b. All sugar industries have to ensure collective responsibility and participation in waste management efforts. Details of action plan for effective handling, disposal, and monitoring of solid waste (boiler ash and ETP sludge) are presented in subsequent sections below:

5.7.1 ETP sludge management

i. Mechanical sludge handling system shall be installed viz. filter press/ screw press/ decanter/ rotary belt filter etc.

ii. Proper record keeping of sludge generation quantity and disposal.

iii. Establishment of a manifest system for environmentally safe collection, storage, handling, transfer and disposal of ETP sludge shall be ensured.

5.7.2 Ash handling and management

i. The sugar industries ensure the installation of air pollution control device viz. electrostatic precipitator/bag filters alone or in combination with other APCD to minimize the air pollutants of boiler.

ii. Boiler ash should be managed scientifically as per CPCB guidelines titled "Guidelines for disposal/utilisation of Fly Ash for reclamation of Low Lying Area and in stowing of Abandoned mines/Quarries", March 2019.

iii. Boiler ash if disposed through landfilling (i.e. stowing of mines or reclamation of low lying area), the site should be:

   (a) properly demarcated and fenced to restrict human and animal intrusion

   (b) properly capped with top soil (with minimum 30 cm cover to promote vegetation growth) after exhaustion of the capacity of filling site. Soil capping can be done once the land filling with boiler ash is completed.

   (c) properly lined and made impermeable to avoid any possibility of contamination of surface water & ground water

iv. Approval from SPCB should be obtained for site selection, safe operation and for development of vegetation cover after exhaustion of the capacity of filling site.

v. **Ash disposal & utilization:**

The waste generated from the combustion process is the bagasse ash in form of furnace ash and fly ash. The quantity of furnace ash is about 25% (by weight) of the total bagasse ash produced and is rich in silica (70-80%), whereas the left over is fly ash which is rich in carbon (40-50%). In general, bagasse ash is mostly disposed of as a filler in landfill sites. Regarding transport of boiler ash in covered vehicle, implementation issue was highlighted as mostly farmers carry the ash in their trolleys. Therefore, Vehicles carrying dry boiler ash to be covered properly before leaving the industry premises. On the other hand, fly ash may be effectively utilized in farming by mixing with the filter cake, if the carbon content is found to be of inorganic type.

Fly ash and furnace ash can be utilized as mentioned below:

Fly ash utilization

a. **Soil Amendment**: The ash can be used as a soil amendment due to its high content of potassium, calcium, and other nutrients that are beneficial for plant

growth. It improves soil structure and fertility, especially in acidic soils. Farmers may approach to reputed Govt. Institute/Agricultural Universities-Krishi Vigyan Kendras for soil testing before applying the fly ash in to the fields.

b. **Fertilizer**: It can be processed into a fertilizer by mixing it with press mud for use in cane farms.

Furnace ash utilization

Since, furnace ash contains high silica, therefore, the furnace ash may be a good alternative of cement replacing material in concrete production.

a. **Construction Material and low land fill**: Boiler ash can be used as a construction material, particularly in road construction and embankments. It improves stability and reduces the risk of settlement. It can be used for filling lowlands also.

b. **Brick Making**: It can be used in brick-making processes, where it acts as a binding agent and filler material.

c. **Environmental Remediation**: It can be used in environmental remediation projects, such as land reclamation and stabilization.

vi. Scattered/ haphazard disposal of boiler ash should be completely stopped.

vii. Proper record keeping should be ensured regarding generation, storage and disposal of boiler ash.

viii. The sugar industries shall establish a manifest system for environmentally safe collection, storage, handling, transfer and disposal of boiler ash. The manifesto shall be submitted to SPCBs for record purpose.

Table 15. Solid waste generation and its treatment/disposal

S.N.	Waste	Quantity, TPD	Treatment	Disposal	Remark
1	Sugar ETP and CPU sludge	Around 0.2-0.3 % on effluent (dry basis) quantity going to ETP or 20% of the input COD load.	Drying/Dewatering	As per manifest system	Organic
2	Ash	1.5 - 2 % on bagasse consumption	Ash quenching and mechanical handling	As per manifest system	Organic

a. Manifest System Facilitation:

- SPCBs should facilitate the sugar industries for establishment of a manifest system for environmentally safe collection, storage, handling, transfer and disposal of boiler ash and ETP sludge. Manifest shall be prepared by the generator of the solid waste. The generator has primary responsibility for the ultimate disposal of the waste and must give the manifest, along with the waste itself, to a licensed solid waste transporter. A copy of the manifest must be delivered by the transporter to the authorized recyclers/ waste to energy plants/co-processing plants, having registration on EPR portal. Each time the waste changes hands, a copy of the manifest must be signed. Copies of the manifest to be kept by each party involved, and additional copies to be sent to appropriate environmental agencies/SPCBs.

  i. Individual industries must maintain a logbook that records waste quantities, types, and disposal methods. This logbook will serve as a crucial reference for waste management audits and assessments.

  (a) SPCBs to supervise waste management practices of sugar industries. This includes overseeing waste handling, transportation, disposal and verification through logbook & manifest system slip.

  (b) SPCBs to verify the accuracy and completeness of the records, which ensures transparency and accountability in boiler ash and ETP sludge management practices.

  (c) Solid waste material to be provided only to authorized recyclers/ waste to energy plants/co-processing plants, having registration on EPR portal developed by CPCB, valid EPR certificate issued by CPCB/SPCB and valid Consent to Establish (CTE) & Consent to Operate (CTO) issued by SPCBs.

- The State Pollution Control Boards (SPCBs) should facilitate the establishment of forums.

  i. The forum should be specifically dedicated for management of solid wastes (Boiler Ash and ETP sludge) generated by industrial units.

  ii. Sugar industries should ensure their responsibility and participation in waste management efforts.

  iii. Member industries of forum to maintain a logbook that records waste quantities, types, and disposal methods. This logbook will serve as a crucial

reference for waste management audits and assessments.

iv. The SPCBs should supervise waste management practices within member industries of forum. This includes overseeing waste handling, transportation, disposal and verification through logbook & manifest system slip.

v. Member units to bear the cost associated with waste management, including transportation, treatment, and final disposal.

vi. The forum will play a crucial role in ensuring compliance with regulations governing the transportation of hazardous industrial waste.

- The forum should facilitate the proper use of the six-copy manifest system.
- This includes ensuring generators and transporters understand the color-coded copies and their designated actions:
  - White Copy: Forwarded to the State Pollution Control Board (SPCB) by the generator.
  - Light Yellow Copy: Signed and returned to the generator by the transporter.
  - Pink Copy: Retained by the disposal facility operator.
  - Orange Copy: Returned to the transporter by the facility after accepting waste.
  - Green Copy: Forwarded to the SPCB by the facility after disposal.
  - Blue Copy: Returned to the generator by the facility after disposal.

5.8 Setting up of Environmental Management Cell (EMC), environmental laboratory and trained & adequate manpower for ETP operations

a. Every sugar industry will set up an EMC to effectively monitor the environmental compliance. The EMC may constitute of following:

i. Executive Director/Vice President/Managing Director/General Manager
ii. ETP in-charge/ Environmental Engineer/ Environmental Manager/EHS Manager/Environmental Officer
iii. Process Head (CC/CE)
iv. Environmental/Chief Chemist
v. ETP Supervisors/Operators & Helper

b. Duties of Environmental Management Cell

i. The EMC shall review the status of water consumption, measures taken and identify the areas for water conservation, resource recovery and pollution reduction every week.

ii. Detailed minutes of the decisions taken will be recorded and circulated to all members of Environmental Cell and follow up of the decisions will be monitored by the Unit Head & ETP in-Charge.

iii. Review to be made in case of non-compliance by any statutory department.

iv. Internal Audit to be done by the EMC on quarterly basis.

v. External Environmental audit on annual basis.

c. Sugar industries will set up an internal lab of ETP with minimum analysis facilities for basic tests and should have below mentioned instruments:

i. pH Meter/pH pen

ii. Water distillation unit

iii. TSS meter

iv. TDS meter

v. DO meter

v. BOD testing kits with incubator

vi. COD testing kits with digester

vii. Oven

viii. Digital weighing balance with 0.1mg accuracy & 10gms accuracy

ix. Necessary Glassware

x. Chemical reagents

xi Digital thermometer/thermometer

A particular time schedule should be followed for measuring various pollution parameters. The frequency of such measurements is listed in Table 16.

Table 16. Frequency of Wastewater Analysis

Parameters	Frequency of Testing
pH	Once in a shift of 8 Hours
TSS	Once in a Shift of 8 hours
TDS	Once in a Shift of 8 Hours
Dissolved Oxygen	Once in a shift of 8 hours
Color visual	Once in a shift of 8 Hours

MLVSS/MLSS	Once in a shift of 8 Hours
COD	Once in a day
BOD	Once in a week

d. Engagement of scientific officials and technical staff for smooth operations of ETP

Details of such staff with their cadre and qualifications are given in Table 17.

Table 17 . Scientific and Technical Staff for ETP and Laboratory

Minimum strength in ETP		
Post	**Education / Experience**	**No of employees**
Environmental Manager/Officer/Head	Masters in Env. Sci/ Masters in Chemistry/Graduate (Engineering)/ANSI (Sugar Tech)	01
Shift Supervisor cum Lab Technician	Graduate/Intermediate (Science)	03 (1 per shift)
Fitters cum operators	Intermediate/ITI pass	0 3 (1 per shift)
Helpers	Adult workers	03 (01 per shift)
Necessary strength of relievers to be maintained for working on 7 days a week (Continuous process)		

e. Training of the Staff

It is essential to provide necessary training to each employee with minimum 5 man days per employee in year by professional trainers from reputed organizations.

5.9 Press mud handling & management

- The press mud has the potential to be used as a biofuel, microbial carrier, soil conditioner, bioremediation of heavy metals, wax production, and concrete formation.
- Designated storage area.
- Record keeping of press mud generation and disposal.

5.10 Compliance of stack emission norms

- The sugar industries located in National Capital Region (NCR), has to ensure emission parameters as per CAQM order which is 80 mg/Nm3.
- Air pollution control device as notified under E(P)Rules,1986 shall be installed to achieve the prescribed emission norms under E(P)Rules, 1986/CAQM/SPCB, whichever is stringent.
- Installation and proper operation of adequate Air Pollution Control Device (APCD) is mandatory.

5.11 Installation of Sewage Treatment Plant (STP)

- It is mandatory to install the sewage treatment plant to treat the sewage generated from the residential colony of sugar industries and ensure compliance with the notified discharge norms.
- Flow meters to be installed at the inlet and outlet of the STP and logbook should be maintained.

5.12 Process Safety Management (PSM)

It has been perceived that industries have the least focus on Process Safety Management. During interaction with industry representatives, it has been observed that most of the incidents happening in the industry are majorly due to bad maintenance of machineries/equipments, poor technical competency, blind cost-cutting, not following procedures or ignoring safe practices, poor emergency response, failing to learn from incidents, lack of availability of safety manual and SOP for safe operation of machines/equipments and lack of awareness among workers regarding safety. Therefore, to minimize the accidents sugar industries should consider following points to achieve the goals of process safety management:

- Sugar industries shall make arrangements of firefighting system
- Sugar industries shall conduct program for process safety management with the employees on regular basis
- Occupational health surveillance program for all employees should exercise on regular basis
- **In cane loading area**:
    - Sugar industries shall engage skilled, experienced and trained cane operator
    - No person shall be allowed to stand or work below the cane unloader
    - Sufficient lighting in the area
    - Maintenance of crane safety limit switches, break & mechanical stopper
    - Ensuring safe access and egress for vehicles carrying sugar cane to avoid risk of major injury due to inadvertent movement of vehicle/ bullock carts.
    - **Feeder, Leveller & Chopper:**
        - All machines should be covered with guards
        - No person shall be allowed to stand or work on feeder conveyor
        - Installation of emergency switches at strategic locations should be mandatory

- **Juice Extraction- Mill**
  - Good housekeeping practice shall be followed to avoid slips and trips while working in the area
  - Installation of guard in all running nip points of devices and mill roles
  - Tapes shall be provided for eye wash /body wash in nearby area
  - Suitable ear protection shall be provided while working in mill area
- **Return bagasse carrier (RBC)**
  - Barricading shall be provided for the opening of RBC carrier to avoid the fall of worker
  - All machines shall be covered with guards
  - Work permits shall be issued for all repair/adjustment on RBC to ensure safe isolation through lock out/tag out.
- **Boiler**
  - At the time of starting of factory, hydraulic pressure testing shall be done at boiler to prevent any type of accident during operation
  - All drives shall be fitted with suitable guards
  - Dust and ash handling system should be installed
  - After getting report of steam leakages, correction should be made immediately.
  - Proper monitoring of Safety Valve should be maintained.
  - Personal protective equipment shall be provided
- **Bagasse storage and handling**

  In order to reduce the fugitive emission in bagasse storage and handling area following measures may be taken: -
  - Proper housekeeping
  - Covered conveyors and transfer points
  - Local exhaust ventilation
  - Provision of personal protective equipment (PPE)
  - Training and supervision
  - Provision of proper fire hydrant system with water monitors
  - Provision of secured fencing to all rotary parts and conveyor nip points with suitable and safe access for working near conveyor
  - Maintenance of pull cord interlock system on both sides of conveyor.

- **Clarification /Evaporation**
  - All heating vessels proper tested to take into operation. Main holes and other opening provided with secured fitting. Avoid working near or below such joints.
  - All process and cleaning chemicals handled safely with protective equipment while handling chemicals.
  - Provided mechanical handling system of sulphur and lime to minimize exposure.
  - Steam pressure and temperature of juice heaters and evaporator bodies maintained properly.
  - Provided safety valve in steam lines and auto vacuum releasing valve in last body of Evaporator.
  - Employees provided with necessary protective measures i.e. safety shoes, hand gloves, respiratory mask, safety helmets, and safety belts etc.
  - Provided proper railing on all open tanks to avoid falling in the tanks.
  - The leakages of SO_2 gas through the burner and pipe lines attend immediately to avoid any mis-happening.
  - Work permit systems i.e. entry into the vessels (bodies, tanks) strictly followed.
- **Rotary vacuum filter& press mud conveyor**
  - All the rotating parts of the rotary vacuum filter guarded properly.
  - Avoid working near rotary parts. Use incidental tool to clean the roller.
- **Pan Section**
  - At the time of starting of the sugar factory, hydraulic pressure testing done all the Pans.
  - Auto vacuum releasing valve installed in all Pans.
  - Work permit system i.e. entry into the vessels strictly followed.
- **Centrifugal Machines**
  - Provided and maintained door /lid interlock of centrifugal machines.
  - Provided guards to all drives.
- **Sugar storage and packing**
  - Use mechanized cleaning of floor.
  - All drives fitted with suitable guards.
  - We have maintained ventilation and dust collection system.

- Elimination of other sources of ignition such as hot work, smoking and naked flames strictly followed.
- We follow safe practices to avoid risks associated with sugar bag handling and stacking.
- Temporary electrical supply given through ELCB/RCCB protected panels as per requirement.
- All hoppers top is covered with GI Sheets.

6. ACTION PLAN

<table>
<tr><th>S. N.</th><th>Action Points</th></tr>
<tr><td>1.</td><td>Implementation of new proposed norms for specific fresh water consumption as tabulated in above Table 9.
<table>
<tr><th rowspan="2">S. N.</th><th rowspan="2">Category</th><th rowspan="2">Sub- category</th><th rowspan="2">Type of Turbine</th><th rowspan="2">Category Code</th><th colspan="2">New Proposed Norms for Specific Fresh Water Consumption (L/T)</th></tr>
<tr><th>Short Term (before crushing season 2026-27)</th><th>Long term (before crushing season 2029-30)</th></tr>
<tr><td rowspan="3">1.</td><td rowspan="3">Standalone (S)</td><td>Sugar mill Sulphitation and low pressure boiler</td><td>Back pressure turbine</td><td>S1</td><td>50</td><td>30</td></tr>
<tr><td rowspan="2">Sugar mill Sulphitation and high pressure boiler</td><td>Condensing mode turbine</td><td>S2A</td><td>100*</td><td>60*</td></tr>
<tr><td>Back pressure turbine</td><td>S2B</td><td>75</td><td>50</td></tr>
<tr><td rowspan="3">2.</td><td rowspan="3">Sugar backend refinery (R)</td><td>Sugar backend with low pressure boiler</td><td>Back pressure</td><td>R1</td><td>50</td><td>30</td></tr>
<tr><td rowspan="2">Sugar backend refinery with high pressure boiler</td><td>Condensing mode turbine</td><td>R2A</td><td>100*</td><td>60*</td></tr>
<tr><td>Back pressure turbine</td><td>R2B</td><td>75</td><td>50</td></tr>
<tr><td rowspan="3">3.</td><td rowspan="3">Integrated Sugar mills with Distillery units</td><td>Sugar mill Sulphitation with low pressure boiler integrated with distillery</td><td>Back pressure turbine</td><td>I1</td><td>50</td><td>30</td></tr>
<tr><td rowspan="2">Sugar mill Sulphitation with high pressure boiler units with co-generation and integrated with distillery</td><td>Condensing mode turbine</td><td>I2A</td><td>100*</td><td>60*</td></tr>
<tr><td>Back pressure turbine</td><td>I2B</td><td>75</td><td>50</td></tr>
</table>
*In case of Sugar Industry with cogeneration, it is presumed that power export is only up to 50 % of home load for every 25% increase in power export, additional 25% specific fresh water consumption shall be permitted. Example mentioned in the NOTE of Table 9.</td></tr>
</table>

2. Implementation of stringent discharge norms (**Timeline**: before crushing season 2029-30)

i. In other sectors stringent norms are being applied therefore to ensure better and consistent compliance in sugar industries, stringent norm for BOD as 20 mg/l is desirable by 2028-29. Till then for compliance verification the notified norms are applicable.

ii. Norms for treated effluent discharge quality is given as under:

Table: Notified surface water discharge standards under E(P)Act, 1986 for sugar industries (for discharge in surface water bodies/drains)

Industry	**Parameters**	**Standards (*All concentration values are in milligramme per litre except for pH*)**
Sugar Industry	pH	5.5 – 8.5
	Total Suspended Solids (TSS)	30
	Biological Oxygen Demand, BOD (3 days at 27°C)	30
	Oil & Grease,	10
	Total Dissolved Solids (TDS)	2100

3. Upgradation/Augmentation of effluent management systems (**Timeline**: before crushing season 2026-27)

i. Installation of mechanical oil & grease skimmer with adequate retention time according to the technology. It is required only on plant influent stream and the surplus of injection can directly go to SRS/Primary treatment.

ii. Upgradation/augmentation of existing ETPs by installing two stage Secondary biological treatment [anaerobic (anaerobic filter/digester) followed by aerobic or two stage extended aeration system] and tertiary treatment up to microfiltration (i.e. bag filters/cartridge filters/ceramic filters, etc.). In the option (i) The capacity of anaerobic filter/digester can be planned only for high COD influent stream only i.e. plant influent with COD>2000-2500 i.e. for 25-30% of total influent.

iii. For effective settling in secondary clarifier, instead of pumping arrangement, ensure flow of effluent by gravity from Aeration Tank (AT) to secondary clarifier.

iv. Installation of Condensate Polishing Units (CPU) in case of high pressure boiler. Industries operating low-pressure boilers (i.e., boilers with a working pressure of <42 kg/cm^2) are exempted from the requirement to install CPUs. Treatment technology for CPU can be selected based on the COD of process condensate and where it may be

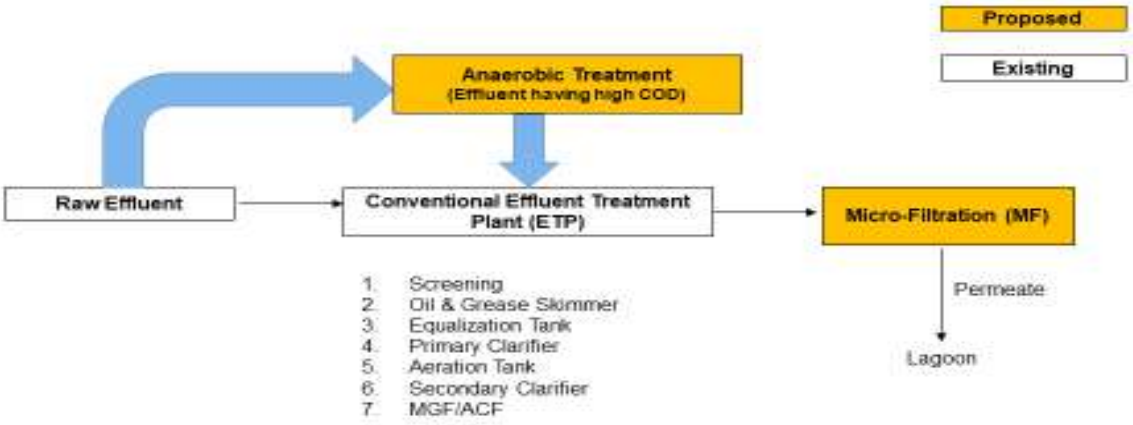
reused. RO treatment can also be adopted if the COD of process condensate is low and the treated condensate is to be used for power plant cooling tower make-up.

v. Fresh adequacy of ETP based on actual quantity of effluent generated after internal recirculation. Fresh adequacy is required only in the case where the production capacity is enhanced or the treatment technology in ETP is changed.

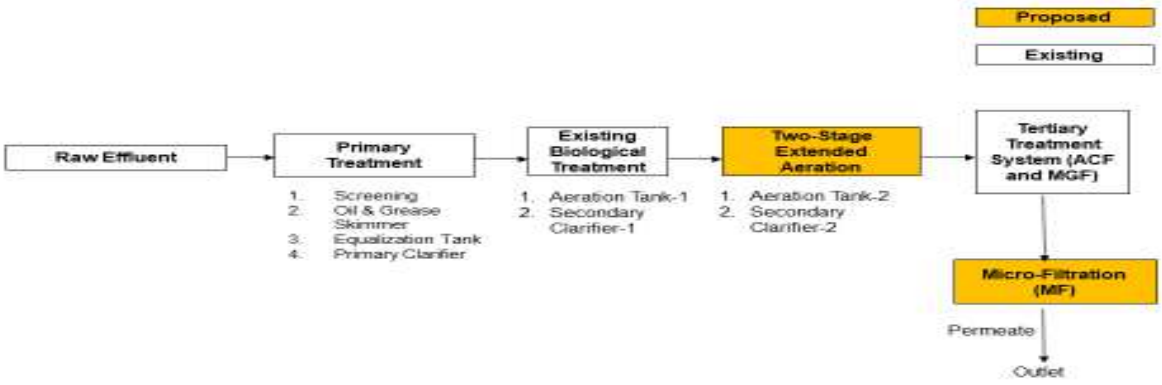
vi. Installation of separate brine recovery system (BRS) towards recovery and reuse of brine solution and to minimize the reject brine quantity. Ensure proper disposal of Brine reject i.e. spraying on bagasse/ burning in incineration boiler /gradual discharge to ETP for treatment etc.

Proposed treatment scheme

Case 1: Anaerobic followed by aerobic



Case 2: Two-stage Extended aeration



4. Sludge Management (**Timeline**: before crushing season 2026-27)

	i. Mechanical sludge handling system shall be installed viz. filter press/ screw press/ decanter/ rotary belt filter etc. ii. Proper record keeping of sludge generation and disposal quantity and method (agriculture field/in-house gardening) iii. Establishment of a manifest system for environmentally safe collection, storage, handling, transfer and disposal of ETP sludge shall be ensured.
5.	Treated effluent utilization and irrigation management plan **(Timeline:** before crushing season 2026-27) i. An impermeable/ impervious lagoon shall require to be constructed for storage of treated effluent during no demand period of irrigation, the treated effluent to be stored in a seepage proof lined lagoon having 15 days holding capacity only. Less than 15 days' storage capacity is also acceptable, if the unit is complying with the Irrigation Management Plan. ii. The monitoring of treated effluent quality in lagoon may be ensured by the sugar industries to avoid algae/algal bloom formation during storage. iii. Installation of flow meter at line carrying treated effluent for irrigation purpose i.e. in-house and agricultural fields and maintain logbooks/records for the same. iv. To utilize the treated effluent in agriculture, the unit shall have the irrigation management plan depending on the different soil texture duly vetted by agricultural universities. v. For sugarcane-growing farmers under their command area emphasis to adopt drip irrigation instead of flood irrigation method by setting annual target of covering 10% land for groundwater conservation before crushing season 2025-26. Irrigation of all the command area by using drip irrigation method before crushing season 2028-29.

Table: New standards for land disposal

Parameters	**Standards (*All concentration values are in milligramme per litre except for pH*)**
pH	5.5 – 8.5
Total Suspended Solids (TSS)	100
Biological Oxygen Demand, BOD (3 days at 27°C)	100
Oil & Grease,	10
Total Dissolved Solids (TDS)	2100

6.	Ash handling and management (**Timeline:** before crushing season 2026-27 i. Air pollution control device as notified under E(P)Rules,1986 shall be installed to achieve the prescribed emission norms under E(P)Rules, 1986/CAQM/SPCB, whichever is stringent. ii. For disposal of boiler ash into agricultural fields, sugar industries shall make agreement/record of disposed ash quantity. iii. The sugar industries shall ensure the controlled application of ash on agricultural land after mixing with press mud. iv. Provide designated and fenced area with caution display at hot boiler ash storage site to avoid accidents. v. Boiler ash shall be used for land filling at low lying areas after attaining ambient temperature. vi. The sugar industries shall establish a manifest system for environmentally safe collection, storage, handling, transfer and disposal of boiler ash. The manifest documents shall be submitted to SPCBs for record purpose. vii. Boiler ash should be transport in covered vehicle.
7.	Setting up of environmental management cell (EMC), environmental laboratory and trained & adequate manpower for ETP operations (**Timeline:** before crushing season 2026-27) i. Setting up of an Environmental Management Cell (EMC) to effectively monitor the environmental compliance. ii. Setting up of an internal lab of ETP with minimum analysis facilities for basic tests. iii. Appointment of scientific officials and technical staff for smooth operations of ETP and regular training to ETP staff.
8.	Installation of sewage treatment plant for treatment of sewage generated from the residential colonies of sugar industries. (**Timeline:** before crushing season 2026-27)

7. FACILITATION TO INDUSTRIES BY SPCBS FOR IMPLEMENTATION OF SUGGESTIVE MEASURES:

SPCBs/ PCCs shall ensure proper implementation of the Charter by the individual sugar industry. They shall be responsible for monitoring and surveillance activities to ensure environmental compliance. In case of any violation of the environmental norms, concerned SPCBs will take appropriate actions, including issuance of closure directions, under the Water/ Air Acts/ E (P) Act.

i. Industries to prepare time bound action plan for implementation of the suggestive measures as mentioned above, including upgradation/augmentation of existing ETPs installed in sugar industries having permission to discharge.
ii. Solid wastes and boiler ash to be provided only to authorized agencies.
iii. Adoption and implementation of manifest system for environmentally safe collection, storage, handling, transfer and disposal of solid waste (boiler ash and ETP sludge).
iv. All individual industry to ensure collective responsibility and participation in waste management efforts.
v. Ensure proper record keeping regarding generation, storage and disposal of solid waste (boiler ash and ETP sludge).

8. APPENDIX

8.1 BARE MINIMUM TECHNOLOGY (BMT)

BMT is indicative of the systems, equipment, processes and practices that are generally considered essential to achievement of the objectives of this Charter. Technology actually required, or implemented, by individual sugar industries to achieve the same documented level of environmental protection, may differ on account of their unique set of circumstances like scale of operations, equipment and system configuration, product portfolio, raw material etc.

Bare Minimum Technologies (BMT)			
S. N.	**Functional Area**	**Facility Required**	
		BMT/Optional	**Type of facility**
1	**Cane preparation and juice extraction**		
1.1	Cane unloading	BMT	Cane carrier of suitable width & length with variable speed drive
		BMT	Hydraulic grabs with cross and longitudinal travel trolleys/ sling bar for cane unloading
			Truck /trolley tippler
1.2	Cane Preparation		System to ensure Preparatory Index (PI) of 85+ by installation of :
		Optional	Cane kicker
		BMT	cane leveller/cane chopper, cane cutter and swing hammer fibrizer/cane shredder
		BMT	Rake elevator below fibrizer/ shredder with variable drive
		BMT	Interlocking system in cane preparatory devices with cane carrier
		BMT	Closed loop water circulation for cooling of bearings of preparatory devices
1.3	Cane Milling	BMT	To attain a Reduced Mill Extraction (RME) of 96+ , a milling tandem comprised of 4 three rollers mills with toothed UFR and Donnelly chute with rake carriers between the mills or any other combination using 2/3 rollers mills with UFR/TRF/GRPF/TRPF
		BMT	Each mill driven by a variable speed DC drive with speed reduction through enclosed reduction gear box/ planetary gear

		BMT	Interlocking of all Rake elevator & rake carriers with mills
		BMT	Hydraulic loading and hot water Compound Imbibition using hot water of 85ºC @ 250-300% on fibre or as required. Flow measurement & control system to be installed
		BMT	Closed loop water circulation for cooling of mill bearings & mill drives
1.4	Spillage Monitoring & Control	BMT	Spill pits/tanks, and drainage system for containment/recovery, dry cleaning of floors with bagasse.
2.0	**Steam Generation**		
		BMT for < 42 kg/cm^2 pressure boiler	Bi-drum boiler with tube bank, front, roof, rear and sides water walls. Super heater, economiser, air pre-heater with ID, FD SA fans etc. Air pollution control device as notified under E(P)Rules,1986 shall be installed to achieve the prescribed emission norms under E(P)Rules, 1986/CAQM/SPCB, whichever is stringent.
		BMT for > 42 kg/cm^2 pressure boiler	Bi-drum boiler with tube bank, front, roof, rear and sides water walls. Primary & secondary Super heaters, atemperator, economiser, air pre- heater, de-aerator, ID, FD, SA fans etc. Electrostatic Precipitator (ESP) for arresting ash and particulate matters (PM)
2.1	Instrumentation & control	BMT	Instrumentation , automation & control through DCS
2.2	Waste water re-cycling	BMT	Closed loop re-circulation of waste water generated from RO/DM reject and boiler blow down after treatment in ETP
2.3	Ash disposal	BMT	Supply to cement plant//brick manufacturing unit (coal based ash) filling of low lying land/ bio-composting/land application
3.0	**Power Generation**		
3.1	With/ without Incidental co-generation	BMT for boiler pressure up to 42 kg/cm^2	Back pressure/ Bleed cum back pressure steam turbine coupled with an alternator to generate electricity at 11 KV
3.2	With incidental co-generation	BMT for boiler pressure	Back pressure/ Bleed cum back pressure/ Extraction cum condensing steam turbine coupled with an alternator to generate electricity at 11 KV

3.3	With incidental and off season co-generation	above 42 kg/cm2	Extraction cum condensing (EC) steam turbine coupled with an alternator
			Water cooled condenser, cooling towers of suitable capacity for EC turbine
			Closed loop cooling water circulation at power generation with cooling tower of suitable capacity
			Suitable switch yard for power export to grid
4.0	**Handling of Discharges**		
4.1	**Waste water Discharges**		
4.1.1	Effluent Treatment Plant (ETP) design	MBT	As per achieving prescribed norm
4.1.2	Treated wastewater disposal		As per norms of CPCB/SPCB/charter recommendations
4.1.3	Condensate Polishing Unit	BMT for surplus condensate for factories having boiler > 42 kg/cm2 steam pressure	Reverse Osmosis (RO) followed by MGF and ACF or any other proven technology. Treated condensate may be used for various purposes e.g. power plant cooling tower make-up.
4.2	**Atmospheric Discharges**		
	Stacks		Air pollution control device as notified under E(P)Rules,1986 shall be installed to achieve the prescribed emission norms under E(P)Rules, 1986/CAQM/SPCB, whichever is stringent.
5.0	**General Pollution Abatement Measures**		
5.1	Resource Management		Optimum use of all material resources through input-output analysis and establishment of moving targets for specific consumption of inputs. Cost audits to be moderated by environmental considerations.
5.2	Good house keeping		Containment and management of material spillages to prevent contamination of soil, ambient air and ground water, besides increasing pollution loads and vitiating workplace environment.

5.3	Chemical cleaning of heat exchangers		Trial & use of hydroject cleaning in place conventional chemical + mechanical cleaning to the extent possible. Construction of " Hazardous Tank" to collect washings of chemical cleaning & for adding gradually in main ETP
5.4	Monitoring & control		Factory –wide fresh water distribution networks be colour coded (as per BIS) to identify process, utility and domestic supplies.
6.0	**Environmental Management Systems**		
6.1	Environmental Control Laboratory		Establishment of testing facilities, manned by trained and dedicated staff, for routine monitoring of effluent generation and performance measurement of pollution control systems, equipment and devices. The staff will also be responsible for maintaining proper records and initiating non-compliance warnings.
6.2	Environmental Audits/ Third party inspection		Half Yearly Comprehensive Audit/ third party inspection Performance audit/inspection by third party during season
7.0	**Compliance Monitoring**		
7.1	Off-line routine monitoring		Routine analysis of pH, TSS, COD, TDS, DO, Colour, MLSS etc. and weekly analysis of BOD,for waste water (effluent) and treated effluent from ETP Routine analysis of PM, SO_2, NOx , CO_2, O_2 for stacks pH, TSS, COD, TDS, MLSS, colour daily. Air quality measurements as prescribed by SPCB
7.2	Flow measurement		Magnetic flow meter with remote mounted transmitter and totalizer feature with connectivity to a remote PC through an RTU
7.3	Online Continuous Monitoring for wastewater		Online monitoring for flow, pH, TSS, BOD, TDS of treated water as required by SPCB
7.4	Online Continuous Monitoring for air emission		Particulate Matter (PM) emission from stacks as required by SPCB
8.0	**Manufacturing of Plantation White Sugar**		

8.1	Juice weighment	BMT	Mass flowmeter of suitable capacity with arrangement for check weighment. System to have auto juice flow control system to have stabilized flow to process.
8.2	Juice heating	BMT	Heating the raw juice and sulphited juice to 68-70 ^{0}C and 103-104^{0}C in tubular/DCH/PTHE/Condensate heaters of suitable heating surfaces in multiple stages. Similarly heating the clear juice in Tubular/PTHE/DCH to desired temperature. Condensates to be utilized for various purposes in mill and boiling house.
8.3	Clarification	BMT	Clarifying the heated raw juice by addition of milk of lime @ 1.2-1.8%, v/v and SO_2 gas in a juice Sulphiter preferably having auto pH control system.
8.4	Milk of lime preparation	BMT	Slacking quick lime with condensate and screening it through hydro cyclone/vibro screen/Koran classifier.
8.5	SO_2 generation	BMT	Generation of sulphur di-oxide in film type sulphur furnace having combustion control and molten sulphur feed control system with efficient cooling of gas to 70-72^{0}C. Re-circulation of cooling water through fanless cooling towers to minimize fresh water usage.
8.6	Settling	BMT	Use of efficient Rapi Dorr 444 type or equivalent clarifier with retention time not exceeding 2 ½ hours.
8.7	Filtration	BMT	Filtration of underflow/muddy juice from clarifier to recover juice in RVF. Hot condensate of about 70^{0}C to be used for cake wash. Alternatively use of Decanters. Quantity of wash water to be monitored by installing flow meters.
8.8	Evaporation	BMT	Concentration of juice so as to convert it in to syrup using Multiple Effect Evaporators, Quadruple or Quintuple with extensive vapour bleeding system to have heat recovery arrangement through installation of condensate cigar & condensate Heaters. Exhaust steam condensate to be used as boiler feed water, whereas condensate from other bodies to be used for meeting requirements of mill & boiling house. For boilers up to 42 kg/cm^2 g pressure, IInd body condensate to be used partially as boiler feed water make up, whereas, for higher boiler pressure, it is to be used after treatment though CPU.
8.9	Syrup Sulphitation	BMT for	Bleaching the syrup obtained from Evaporators to a pH 5.2-5.4 using SO_2 gas.
9.0	Crystallisation	BMT	**a.** Further concentration of sulphited syrup in vacuum pans (single effect evaporators) to carryout crystallization of sugar. Low head batch pans/ low head batch pans with

			mechanical circulator/continuous vacuum pans to be used. Level of boiling mass in pan and fluctuation in vacuum to be avoided to inhibit entrainment. Tell tail bottles to be provided to periodically check any entrainment. Use of hot water during pan boiling to be measured by installing flow meter & efforts to be made to keep it as low as possible. Condensates to be utilized in a closed loop for meeting mill & boiling house requirements. **b.** Cooling & conditioning of massecuite boiled in vacuum pans in air/water cooled batch/ continuous crystallizers. A – massecuite to be hot cured, B- massecuite cooled to about 52-54°C & C massecuite to be cooled to 40-42°C & then reheated to 52-54°C. Proper cooling arrangement to be provided for re-circulating cooling waters.
9.1	Centrifugation	BMT	Separation of sugar crystals from mother liquor by centrifuging in fully automatic recycling type batch centrifugal in case of A- Massecuite and in continuous machines in case of other massecuite. Quantity of wash water to be monitored & controlled by installing flow meters.
9.2	Cooling & Condensing		Installation of single/multi entry stainless steel jet condensers. The difference between injection water inlet and tail pipe temperature to be 8-15 ^{0}C. For spray ponds, minimum drop of 13^{0}C or within 7^{0}C of wet bulb temperature, whichever is less, to be achieved. For cooling towers, minimum drop of 20^{0}C or within 5^{0}C of wet bulb temperature, whichever is less, to be achieved.
9.2	Sugar Dryer	BMT	Drying of sugar on grass hoppers or fluidized bed dryers to the extent that level of moisture should not be more than 0.06 % w/w.
10.0	**Additional steps for production of Refined Sugar**		
10.1	Raw sugar melting	BMT	Raw sugar melting in sweet water generated from IER and hot condensate.
10.2	Filtration	BMT	Filtration of raw sugar melts through vibro screen / stationary screen of about 0.75 mm opening.
10.3	Remelt liquor heating	BMT for phosphatation process.	Remelt filtered liquor heating in DCH or PTHE up to 85^{0}C of suitable heating surfaces.

10.4	Clarification	BMT	Clarifying the heated remelt liquor by addition of colour precipitant of about 100-150 ppm & about 400-500 ppm P_2O_5 on solid and milk of lime of 2-2 ½ ^{0}Be. Retention time in reaction tank to be about 8 minutes and in floatation clarifier to be about 30-40 minutes.
10.5	Filtration	BMT	One or two stage filtration of underflow using MBF/ candle / leaf filters of suitable filtering area & filtration rate of about 0.45-0.50 $m^3/m^2/hr$.
10.6	Decolourization	BMT for ion exchange resin	Decolourization of clarified liquor in two stage IER columns used in series or in parallel using Acrylic & Styrenic type resins. Two stage brine recovery system to be provided for facilitating 80% recovery.
10.7	Melt Concentration	BMT	Evaporation in Double / Triple Effect Evaporator to convert it in to concentrated liquor of about 74-75^{0}Bx. Condensates to be utilized for various purposes of melting etc.

8.2 BEST PRACTICES FOR SUGAR INDUSTRY

A. Best practices and strategies for reduction of fuel consumption and achieving maximum steam efficiency

- In order to decrease the fuel consumption, it is necessary to improve boiler and steam efficiency. To attain the maximum steam efficiency by limited usage of fuel, installation of a high-pressure boiler the following key points shall be considered:
- DE-aerator charging system utilizing exhaust steam.
- High-pressure heater to preheat boiler feed water to a temperature of at least 165°C.
- Passage of excess air required for fuel combustion through an Air Preheater (APH) to preheat air, aiding in proper fuel combustion.
- Proper maintenance of boiler furnace panels and piping insulation to prevent radiation losses.
- Designing the boiler with all necessary control devices and loops and ensuring it operates in auto mode through a DCS system.
- Maintaining bagasse moisture below 50% for effective fuel combustion.
- Optimization of boiler blows down to reduce fresh water consumption through regular parameter analysis of feed water.
- Reduction of steam losses by installing steam traps to maximize condensate

recycling

B. Best practices to reduce steam consumption in sugar process

Reducing steam consumption in sugar manufacturing is crucial for enhancing energy efficiency, cutting costs, and minimizing environmental impacts. The sugar industry traditionally relies heavily on steam for various processes such as juice heating, evaporation, crystallization, and curing. Here are some best practices to reduce steam consumption in sugar manufacturing:

C. Optimize Juice Extraction

- Maximize extraction of juice from sugarcane.
- Use energy-efficient milling or diffusion systems to extract juice.

D. Enhance Heat Exchange Systems

- Implement efficient heat exchangers to recover and reuse heat from hot process streams, such as condensate from evaporators and vapors from pans.
- Utilize multi-effect evaporation systems that use the vapor from one effect as the heating medium for the next, significantly cutting down the steam requirement.

E. Adopt Vapour Recompression

- Mechanical or thermal vapor recompression (MVR or TVR) can be used to compress and reuse low-pressure steam, increasing its temperature and pressure for reuse in the process, thereby reducing fresh steam demand.

F. Improve Process Control and Automation

- Use advanced control systems for precise control over steam flow, temperature, and pressure, ensuring optimal steam usage.
- Automate steam traps and condensate return systems to prevent steam loss and improve condensate recovery.

G. Regular Maintenance

- Regularly maintain steam pipes, valves, and fittings to prevent leaks and losses of steam.
- Ensure that insulation on steam pipes and vessels is intact and effective to reduce heat loss.

H. Condensate Recovery

- Efficiently collect and return condensate to the boiler for reuse. This not only saves water but also the energy needed to heat fresh water.
- High-quality condensate can reduce the boiler's fuel consumption and chemical treatment requirements.

I. Batch Pan Crystallization Improvements

- Optimize seeding and massecuite cooling techniques to minimize the steam used in the crystallization phase.
- Explore continuous pan systems that can use vapor bleeding techniques for more efficient steam usage.

J. Best practices for reduction in fresh water consumption

Providing micro-irrigation (drip irrigation) system for sugarcane crop will be reduce significant groundwater extraction at field.

Efficient water management holds paramount importance in sugar manufacturing for mitigating environmental impact and operational costs.

- **Recycling and Reuse:** Implementing systems to recycle and reuse process water whenever feasible, such as utilizing condensate for various purposes.
- **Optimized Process Design:** Designing processes to minimize water usage, such as employing closed-loop systems and optimizing cleaning procedures to mitigate water wastage. Use of hydro jet cleaning and dry cleaning.
- **Advanced Technologies:** Investing in advanced technologies like membrane filtration and reverse osmosis with polishing unit to treat and reuse excess condensate generated from the sugar process, thus reducing the consumption of fresh water for boilers.
- **Water-Efficient Equipment:** Installing water-efficient equipment and machinery throughout the manufacturing process and water-saving pumps equipped with mechanical seals rather than gland sealing.
- **Regular Maintenance:** Conducting regular maintenance of equipment to prevent leaks and ensure efficient water use**.**
- **Employee Training:** Educating employees about the significance of water conservation and implementing training programs to promote water-saving practices.
- **Optimization of Boiler Blowdown:** Maintaining boiler water quality as per

requirements to reduce the frequency of blowdown, thereby minimizing fresh water intake at RO/DM and reducing effluent generation.

- **Rooftop rainwater harvesting:** Harvesting of rainwater during rainy season and storage for utilization during commencement of crushing season
- **Adaption of dual plumbing system:** Installation of dual plumbing system to reduce freshwater consumption by reusing treated wastewater for flushing in toilets

Laboratory: Made provision of polished permeate line at lab for laboratory purpose, this might be 20 mg/l to 25 mg/l TDS water and good replacement of fresh for laboratory purpose.

K. Best practices to reduce effluent generation

Effluent generation reduction strategies can be effectively implemented through various measures:

- **Centralized Grease Lubrication System:** Installing a centralized grease lubrication system instead of oil lubrication can prevent oil contamination and spillage, especially with bearing cooling water in the mill and process house.
- **Minimization of Juice or Water Leakages:** To reduce effluent generation, efforts should be focused on minimizing leakages of juice or water at the mill house. This canbe achieved by implementing preventive measures to address gland leakages. Collecting any leakages in a pit and subjecting them to physical and chemical treatment to prevent microbial contamination, facilitating recycling. Installing proper arrangements to prevent spitting from both sides of mill rollers.
- **Dry Cleaning and Collection of Leaks:** Keeping the mill house bottom foundation area dry and opting for dry cleaning instead of water washing can help reduce effluent generation. Additionally, collecting all gland leakages and tank spillages in a pit and promptly returning them to the process house for treatment is essential.
- **Cleaning Schedule and Communication:** Establishing a cleaning schedule for mill house and process house equipment and effectively communicating it to the Environment department ensures proper maintenance and minimizes effluent generation.
- **DSM Screen / Static Screen Installation:** Providing DSM screens/rotary screens or static screens for the removal of bagasse and foreign material from effluent generated by the sugar plant not only improves effluent quality but also reduces temperature.

L. For indoor air pollution management

Usually bagasse is used as fuel for boiler in the sugar industries and this process causes emission of pollutants such as SO_2, CO & NO_2. In addition to this milling, sulphitation process evaporation and sugar dust in packaging house, bagasse and ash handling are other emission sources that causes air pollution. Following steps shall be taken by the sugar industries:

- Factories should have installed APCD to minimize the air pollutants of boiler.
- Adoption of leak proof system to prevent leakages of SO_2.
- Dust collector mechanical device should be installed in sugar drier house to arrest the sugar dust particles.
- Personal protective equipment should be provided to the workmen at their working place.
- Mechanical handling of ash and bagasse

Handling of chemicals and housekeeping

Hazardous chemicals

i. In case of chemical/mechanical cleaning of the heat exchangers is practiced, 'Hazardous Tank' of adequate capacity (so as to facilitate addition @ 5% max. v/v of total effluent) or surge tank at ETP may be provided to collect washings and their addition to ETP gradually so as to avoid shock loads and to reduce the pollution load as well.

ii. The sugar factories shall also require to maintain the disposal records of Hazardous Substances (oil & grease or any hazardous substances etc.) and annual return in Form-4.

iii. It is recommended that covered area should be provided to store the hazardous wastes at hazardous wastes collection site.

iv. Dry cleaning of factory floors etc. using bagasse should be practiced instead of wet cleaning using water.

v. Separate collection of hazardous chemicals generated during lab analysis of physico-chemical parameters of sugar effluent and its proper disposal through TSDF shall be recommended.

vi. Centralized lubrication system with grease may be installed for cooling of mill bearings to reduce the effluent and oil contamination in water.

vii. Minimum use of cleaning chemicals and use of hydro jet machines for evaporator cleaning

viii. Buffer tanks in process house to restrict the shock load in case of any accidental spillage/overflow

ix. Proper engineering control to avoid leakages and spillages in the plants

a. Good housekeeping

i. Good housekeeping must be ensured by preventing spillages, leakages and overflows etc. which otherwise increases the load of pollutants in the waste waters coming out of different sections of the factory.

ii. Proper maintenance of process parameters is necessary to avoid over sulphitation of syrup and also preventing entrainment so as to minimize contamination of the process cooling tower/spray pond water, in particular. External catchalls may also be provided in the last body of the Evaporator and also in the pans.

iii. Likewise, unnecessary blowing of safety valve and loss of exhaust steam/vapors through noxious gas removal system to be minimized. The radiation, condensation and losses due to leakages are also required to be minimized.

iv. Treated effluent use in preparation of chemicals for dosing at ETP is recommended, there should not be any provision of separate freshwater line for the said purpose.

v. Display of ETP layout with capacity and dimensions of each unit at ETP

vi. Greenbelt development in factory premises and around the ETP

vii. Factory should develop and implement comprehensive safety polity in unit

viii. Installation of factory layout at main gate

8.3 DOCUMENTATION UNDER CHARTER 2.0

Proper records in prescribed formats shall be made routine practice and periodically reviewed by the industry, which can be provided to the SPCBs/CPCB as and when required. The sugar industry shall maintain logbooks/records for the following:

1.	Environmental Clearance and compliances uploaded on PARIVESH portal
2.	Air Consent
3.	Water Consent
4.	Hazardous Waste Authorization
5.	Agreement with third party for disposal of Hazardous Wastes
6.	Copy of Form-4 and Form-10 (Manifesto, Annual return etc.)
7.	Valid CGWA NOC/Application copy
8.	Daily Manufacturing Report
9.	Process details- Material Balance
10.	Form RT-8C (current + previous crushing season)
11.	Bore well/Tube well log book
12.	Hot & Cold Water recycling system logbook

13.	Detailed Water Balance diagram
14.	ETP flow diagram along with dimensions of ETP units
15.	ETP Adequacy Report
16.	ETP effluent generation and discharge log book/record
17.	ETP Logbook for parameter analysis
18.	ETP Sludge generation/disposal logbook
19.	Details of Condensate Polishing Unit (CPU) system adopted by the industry (If applicable)
20.	Boiler & fly ash generation/disposal logbook
21.	Boiler & fly ash disposal point (If boiler ash is sent to cement industry then submit agreement with cement industry)
22.	Press mud generation and disposal log book/record
23.	Disposal record of hazardous wastes
24.	Chemical dosing/consumption record (for pH maintenance etc.)
25.	Energy Meter logbook for ETP
26.	Laboratory analysis of ETP carried out by the unit
27.	Laboratory analysis of ETP carried out by third party/external agency
28.	Spray Pond overflow treatment process details
29.	Spray Pond overflow logbook
30.	Irrigation Management Plan and farmers agreement
31.	Record for treated effluent used in irrigation/other purpose
32.	Record for treated effluent used in attached distillery
33.	Dimensions/drawings of: i. Lagoons ii. Hazardous tanks iii. Other Pits (if, any) iv. UGRs (hot & cold)
34.	Piezometer details – locations name with co-ordinates
35.	STP flow diagram and logbook (**if installed/applicable**)
36.	List of flow meters, their locations in sugar mill and logbooks - Fresh water abstraction and use - ETP inlet & outlet and spray pond overflow - Treated effluent for own purpose and farmer's irrigation
37.	Details of OCEMS
38.	Details of Air Pollution Control System and third party stack monitoring results

8.4 CASE STUDY:

A. 5000 TCD STANDALONE SUGAR MILL WITH LOW PRESSURE BOILER

Summary of the water balance for case 1				
S. N.	**Particular**	**C Heavy**	**B Heavy**	**Syrup & B Heavy**
		M^3/Day		
1	Total excess condensate available after use in process	900.00	795.00	764.00
2	Boiler blow down going to ETP	7.00	7.00	7.00
3	Effluent generation from cold water	517.00	517.00	517.00
4	Effluent generation including boiler blow down (i.e. 2 + 3)	524.00 (104.8 Lit/ton of cane)	524.00 (104.8 Lit/ton of cane)	524.00 (104.8 Lit/ton of cane)
5	Cold water loss during circulation	23.00	23.00	23.00
6	Total water requirement after considering water losses in effluent and cooling water (524 + 23.00 = 547.00)	547.00	547.00	547.00
7	Makeup water used from excess condensate after cooling treatment	547.00	547.00	547.00
8	**Balance excess condensate after use as makeup (1- 6)** **C Heavy: 900.00 – 547.00 = 353.00** **B Heavy: 1000.00 – 547.00 = 453.00** **Syrup & B Heavy: 964.00- 547.00 = 417. 00**	**353.00 (70.6 Lit/ton of cane)**	**453.00 (90.60 Lit/ton of cane)**	**417.00 (83.40 Lit/ton of cane)**
9	**Spray pond overflow generation from process**	**500.00 (100 Lit/ton of cane)**	**400.00 (80 Lit/ton of cane)**	**300.00 (60 Lit/ton of cane)**
10	**Total waste water generation including: cold water effluent + balance excess condensate + spray pond overflow (4 + 8 + 9)**	**1377.00 (275.40 Lit/Ton of cane)**	**1372.00 (275.40 Lit/Ton of cane)**	**1241.00 (248.20 Lit/Ton of cane)**
11	****Fresh water requirement for process after use of excess condensate**	**00**	**00**	**00**
12	Fresh water requirement for lab and domestic use	50.00	50.00	50.00

** This is applicable towards the normal operations of the unit but fresh water for initial startup and also during long plant shutdowns/reduced crushing situation at the end of season, the additional fresh water will be required which will be around 50 Lit/ton of cane for the season as a whole but this is occasional.

B. 5000 TCD SUGAR MILL WITH HIGH PRESSURE BOILER WITH CONDENSING MODE TURBINE

Summary of the water balance for case 2				
S. N.	**Particular**	**C Heavy**	**B Heavy**	**Syrup & B Heavy**
		M^3/Day		
1	Total excess condensate available after use in process	564.00	663.00	611.00
2	Water requirement for cooling tower makeup from excess condensate	72.00	144.00	260.00
3	Loss of cold-water during cooling makeup through excess condensate after cooling	20.00	20.00	20.00
4	**Balance excess condensate after makeup for cooling tower and losses (i.e. 1 – 2 - 3)**	**472.00 (94.4 Lit/ton of cane)**	**499.00 (99.8 Lit/ton of cane)**	**331.00 (66.2 Lit/ton of cane)**
5	Boiler blow down going to ETP	5.00	5.00	5.00
6	RO reject going to ETP	73	67	61
7	Cooling tower blow down going to ETP	72	144	260
8	Effluent generation from cold water	517.00	517.00	517.00
9	**Effluent generation including RO reject and cooling tower blow down (i.e. 5 + 6 + 7+ 8)**	**667.00 (133.4 Lit/Ton)**	**733.00 (146.6 Lit/Ton)**	**843.00 (168.60 Lit/Ton)**
10	**Spray pond overflow generation from process**	**500.00 (100 Lit/Ton)**	**400.00 (80 Lit/Ton)**	**300.00 (60 Lit/Ton)**
11	**Total waste water generation including balance excess condensate, cold water effluent and spray pond overflow (i.e. 4 + 9 +10)**	**1639.00 (327.80 Lit/ Ton of cane)**	**1632.00 (326.40 Lit/Ton of cane)**	**1474.00 (294.80 Lit/ Ton of cane)**
12	**Fresh water requirement for boiler makeup through RO**	**180.00 (36 lit/ton of cane)**	**168.00 (34.00 Li/ton of cane)**	**153.00**

				(31.00 Lit/ton of cane)
**13	Fresh water requirement for lab and domestic use	50.00	50.00	50.00

*Note: In these calculations, it is considered that minimum required steam will go to turbine generator (TG) condenser but if unit is having co-generation with the increase of power export, the steam to condenser will increase resulting higher water recirculation in TG cooling towers. Hence higher loss of water and higher opportunity for reuse of excess condensate resulting lesser waste water generation

** This is applicable towards the normal operations of the unit but fresh water for initial startup and also during long plant shutdowns/reduced crushing situation at the end of season, the additional fresh water will be required which will be around 50 Lit/ton of cane for the season as a whole but this is occasional.

C. 5000 TCD SUGAR MILL WITH HIGH PRESSURE BOILER WITH BACKPRESSURE MODE TURBINE

Summary of water balance for case 3				
S. N.	**Particular**	**C Heavy**	**B Heavy**	**Syrup & B Heavy**
		M^3/Day		
1	Total excess condensate available after use in process	562.00	663.00	611.00
2	Fresh water requirement for cooling tower makeup	72.00	72.00	72.00
3	Loss of cold-water during cooling	20.00	20.00	20.00
4	Balance condensate after reuse in makeup water	470.00 (94.4 Lit/Ton of cane)	571.00 (114.2 Lit/ton of cane)	519.00 (104.00 Lit/ton of cane)
5	Boiler blowdown going to ETP	5.00	5.00	5.00
6	RO reject going to ETP	62.00	59.00	53.00
7	Cooling tower blow down going to ETP	72.00	72.00	72.00
8	Effluent generation from cold water	517.00	517.00	517.00
9	**Total effluent generation including boiler blow down, RO reject and cogeneration cooling tower blow down (i.e. 5 + 6 + 7 + 8)**	**656.00 (131.20 Lit/Ton)**	**653.00 (130.60 Lit/Ton)**	**647.00 (129.40 Lit/Ton)**

10	Spray pond overflow generation from process	500.00 (100 Lit/Ton)	400.00 (80 Lit/Ton)	300.00 (60 Lit/Ton)
11	**Total waste water generation including balance excess condensate, effluent and spray pond overflow (4 + 9 + 10)**	**1626.00 (325.20 Lit/Tone of cane)**	**1624.00 (324.80 Lit/Tone of cane)**	**1466.00 (293.20 Lit/Tone of cane)**
12	**Fresh water requirement for boiler makeup through RO**	**154.16 (30.83 Lit/Tone of cane)**	**146.33 (29.26 Lit/Tone of cane)**	**130.33 (26.06 Lit/Tone of cane)**
** 13	Fresh water requirement for lab and domestic use	50.00	50.00	50.00
** This is applicable towards the normal operations of the unit but fresh water for initial startup and also during long plant shutdowns/reduced crushing situation at the end of season, the additional fresh water will be required which will be around 50 Lit/ton of cane for the season as a whole but this is occasional.				

D. 5000 TCD BACKEND SUGAR REFINERY, HIGH PRESSURE BOILER WITH CONDENSING MODE TURBINE

Summary of water balance for case 4				
S. N.	**Particular**	**C Heavy**	**B Heavy**	**Syrup & B Heavy**
		M^3/Day		
1	Total excess condensate available after use in process	618.00	715.00	664.00
2	Loss of cold-water during cooling	22.00	22.00	22.00
3	Condensate water requirement for cooling tower makeup	130.00	230.00	331.20 Say 332.00
4	Balance excess condensate after makeup for cooling tower and loss	466.00 (93.2 Lit/ton of cane)	463.00 (92.60 Lit/ton of cane)	310.00 (62.00 Lit/ton of cane)
5	Boiler blow down going to ETP	7.00	7.00	7.00
6	RO reject going to ETP	74.00	70.00	65.00
7	Cooling tower blow down going to ETP	130.00	230.00	332.00

8	Effluent generation	567.00	567.00	567.00
9	Total effluent generation including boiler blow down, RO reject, cooling tower blow down (5+6+7+8)	778.00 (155.60 Lit/Ton)	874.00 (174.80 Lit/Ton)	971.00 (194.20 Lit/Ton)
10	Spray pond overflow generation from process	500 (100.00 Lit/Ton)	400 (80.00 Lit/Ton)	300 (60.00 Lit/Ton)
11	Total waste water generation including balance excess condensate, cold water effluent and spray pond overflow (i.e. 4 + 9 + 10)	1744.00 (348.80 Lit/ton of cane)	1737.00 (347.40 Lit/ton of cane)	1581.00 (316.20 Lit/ton of cane)
12	Fresh water requirement for boiler makeup through RO	184.00 (36.80 Lit/ton of cane)	175.00 (35.00 Lit/ton of cane)	162.00 (32.40 Lit/ton of cane)
**13	Fresh water requirement for lab and domestic use	50.00	50.00	50.00

*Note: In these calculations, it is considered that minimum required steam will go to turbine generator (TG) condenser but if unit is having co-generation with the increase of power export, the steam to condenser will increase resulting higher water recirculation in TG cooling towers. Hence higher loss of water and higher opportunity for reuse of excess condensate resulting lesser waste water generation

** This is applicable towards the normal operations of the unit but fresh water for initial startup and also during long plant shutdowns/reduced crushing situation at the end of season, the additional fresh water will be required which will be around 50 Lit/ton of cane for the season as a whole but this is occasional.

E. 5000 TCD BACKEND SUGAR REFINERY, HIGH PRESSURE BOILER WITH BACKPRESSURE MODE TURBINE

Summary of water balance for case 5				
S. N.	**Particular**	**C Heavy**	**B Heavy**	**Syrup & B Heavy**
		M^3/Day		
1	Total excess condensate available after use in process	628.00	715.00	664.00
2	Loss of cold-water during cooling	22.00	22.00	22.00
3	Condensate water requirement for cooling tower makeup	72.00	72.00	72.00

4	**Balance excess condensate after use for makeup [1-(2+3)]**	**534.00 (106.80 Lit/ton of cane)**	**621.00 (124.20 Lit/ton cane)**	**570.00 (114.00 Lit/ton of cane)**
5	Boiler blow down going to ETP	6.00	6.00	6.00
6	RO reject going to ETP	72.40 Say 73	69.00	64.00
7	Cooling tower blow down going to ETP	72.00	72.00	72.00
8	Effluent generation	567.00	567.00	567.00
9	**Total effluent generation including boiler blow down, RO reject, cooling tower blow down (i.e. 5 + 6 + 7 + 8)**	**718.00 (143.6 Lit/Ton)**	**714.00 (142.80 Lit/Ton)**	**709.00 (141.80 Lit/Ton)**
10	Spray pond overflow generation from process	500.00 (100 Lit/Ton)	400.00 (80 Lit/Ton)	300.00 (60 Lit/Ton)
11	**Total waste water generation including balance excess condensate, cold water effluent and spray pond overflow (i.e. 4 + 9 + 10)**	**1752.00 (350.40 Lit/ton of cane)**	**1735.00 (347.00 Lit/ton of cane)**	**1579.00 (315.80 Lit/ton of cane)**
12	**Fresh water requirement for boiler makeup through RO**	**181.00 (36.20 Lit/ton of cane)**	**172.50 (34.50 Lit/ton of cane)**	**160.00 (32.00 Lit/ton of cane)**
**13	Fresh water requirement for lab and domestic use	50.00	50.00	50.00

** This is applicable towards the normal operations of the unit but fresh water for initial startup and also during long plant shutdowns/reduced crushing situation at the end of season, the additional fresh water will be required which will be around 50 Lit/ton of cane for the season as a whole but this is occasional.

8.5 Standard Operating Procedure (SOP) for operation and stopping of Effluent Treatment Plant (ETP) during pre and post crushing season

Objective:

To establish procedures for the safe and efficient commissioning and stopping of the Effluent Treatment Plant (ETP), ensuring compliance with environmental regulations and operational efficiency.

Scope:

This SOP applies to all personnel involved in the operation, commissioning, and shutdown procedures of the ETP within the sugar mill premises.

Responsibilities:

1. **ETP Operators:**
    a. Execute commissioning and shutdown procedures as per this SOP.
    b. Monitor process parameters and ensure plant efficiency.
    c. Report any abnormalities or deviations promptly.
2. **Maintenance Team:**
    a. Conduct routine maintenance and checks as per the maintenance schedule.
    b. Ensure all equipment and systems are in working order.
3. **Safety Officer:**
    a. Ensure all safety protocols are followed during commissioning, operation, and shutdown.
    b. Conduct safety briefings and inspections as required.
4. **Commissioning Procedure:**
    1. **Preparation:**
        a. Inform the regional pollution control board about the commissioning of ETP
        b. Check the connection and of the online monitoring system ensure the connection with the server of CPCB and SPCB
        c. Notify all relevant personnel about the upcoming commissioning or starting of the operation of ETP.
        d. Ensure availability of necessary chemicals, equipment, tools and PPE.

2. Initial Inspection:

a. Verify and complete the maintenance of all the equipment's and tanks, including effluent inlet and outlet flowmeters, oil and grease removal mechanism, feed pumps, sludge pumps, screens, oil and grease removal units, equalization tank, neutralization tank, agitator, primary clarifier scrapper arm and gearbox, anaerobic reactor, aerobic reactor and its media, Aerobic tank including air diffusor, air blower, valves, secondary clarifier scrapper arm and gearbox, multi-grade sand filter, and activated carbon filter, are installed aligned properly and operational.

b. Complete the calibration of all the flow meters installed at ETP

c. Check electrical panel board connections and ensure proper grounding. Ensure there is no leakages of electricity and avoid electrocution of the equipment's

3. Start-up Sequence:

a. Start with the screening and oil and grease removal system:
   - Ensure screens are operational and clean.
   - Start oil and grease removal unit according to manufacturer's instructions.

b. Proceed to the equalization tank:
   - Open inlet valves to allow influent flow into the equalization tank.
   - Monitor influent characteristics and adjust flow rates as necessary.

c. Neutralization tank operation:
   - Start mixing and pH adjustment as per the treatment requirements.
   - Monitor pH levels and adjust chemical dosing if required.

d. Primary clarifier operation:
   - Open inlet valves to allow flow into the primary clarifier.
   - Start sludge scraping mechanism and adjust sludge wasting rates.

e. Anaerobic treatment:
   - Open inlet valves to direct flow into the anaerobic reactor.
   - Start anaerobic digestion process.
   - Monitor reduction in COD and BOD, biogas production (In case of UASB or CSTR) and adjust as necessary flow and chemical doses.

f. Aerobic treatment:
   - Transfer effluent from anaerobic reactor to aerobic reactor.
   - Start aeration system by opening the valves of air distribution lines and star air blowers

- Gradually increase aeration rate to achieve desired dissolved oxygen levels.
- Monitor and adjust pH levels, nutrient dosing, and MLSS (Mixed Liquor Suspended Solids) concentrations.

g. Secondary clarifier:
- Open inlet valves to allow treated effluent from the aerobic reactor into the secondary clarifier.
- Start sludge settling and removal mechanisms.
- Monitor and adjust the rotations of sludge scrapping mechanism for proper sludge removal

h. Filtration systems:
- Start multigrid sand filter and activated carbon filter units.
- Monitor filtration efficiency and backwash cycles as required.

4. Process Stabilization:

a. Monitor effluent quality and process parameters (e.g., pH, COD, BOD, TSS, TDS, MLSS etc.)
b. Conduct settling tests in clarifiers and adjust sludge removal rates if necessary.
c. Optimize operational parameters for stable performance.

5. Performance Testing:

a. Perform initial effluent quality testing to ensure compliance with regulatory standards.
b. Record and analyse data to identify any operational adjustments needed.
c. Conduct regular third party monitoring and analysis of the treated and untreated effluent

6. Documentation/data records:

a. Records of daily incoming effluent and treated discharge/recycle
b. Daily logbook of laboratory analysis
c. Daily chemicals and power consumption
d. Data of sludge generation and ultimate disposal
e. Maintain the record of online monitoring system
f. Maintain the record of the third party monitoring and analysis reports of treated and untreated effluent
g. Maintain the calibration record for OCEMS, flowmeters, lab equipment's etc.

7. **Stopping Procedure:**

i. **Preparation:**

a. Inform the relevant regulatory authority about the shutdown of the ETP

b. Notify all relevant personnel in the sugar mill about the impending shutdown.

c. Ensure there is no effluent coming out of the mill or directly discharge outside the premises without treatment.

ii. **Shutdown Sequence:**

a. Treat the complete available effluent in the inlet/equalization tank and cease influent flow to the ETP by closing inlet valves.

b. Gradually reduce aeration in the aerobic reactor.

c. Stop anaerobic reactor operations as per manufacturer's instructions.

d. Ensure proper drainage and cleaning of all treatment units.

iii. **Safety Measures:**

a. Secure all electrical connections and equipment.

a. Conduct final safety checks to ensure no hazards exist post-shutdown.

iv. **Documentation:**

a. Record shutdown activities, including final operational readings and any maintenance performed.

b. Update maintenance logs and equipment status.

8. **Emergency Procedures:**

a. In case of any malfunction or emergency during commissioning or operation, follow the emergency response plan specified in the ETP SOP.

b. Notify management and take necessary actions to mitigate risks to personnel and the environment.

9. **Review and Revision:**

a. This SOP shall be reviewed annually or as needed to incorporate improvements or changes in procedures based on operational feedback or regulatory updates.

8.6 Format for logbook for daily water consumption

a. As per SGWB/CGWA guidelines, it is mandatory to install digital water flow meters at the outlet of borewell/tubewell and to maintains the logbook for daily water consumption. In the logbook, initial and final readings should be mentioned on daily basis following format:

Date and Time	Industrial Borewell/Tubewell -1				Cane Crushed - MT		Specific Water Consumption – L/T of cane crushed		Remarks
	Initial Reading	Final Reading	Water abstraction (For the Day in KL)	Water abstraction (KL) (To date)	For the day - MT	To date – MT	For the day	To date	
Day/Month/ Year AM/PM	A	B	C=B-A	D=C+ Pre Day abstraction	X	Y	C*1000 /X	=D*1000/Y	

b. In case of more than one borewell/tubewell, more columns can be incorporated with one total water abstraction column.

c. During the visit, inspecting authority will take the meter readings of all the borewells physically and match it with the log book to ensure that the data recorded in the logbook is matching with the reading of the flow meters.

d. As per SGWB/CGWA guidelines, the flowmeters should have telemetry arrangement for online data transfer to SGWB/CGWA portal which is yet to be operational.

e. For normal operating days (excluding initial fills or stoppages) the specific water consumption should be within the allowed limit.

f. In the case of initial fills, stoppages and before the starting of crushing season the sugar industry shall maintain the record of freshwater consumption separately to avoid the deviation in monthly average quantum of freshwater consumption.

g. In the case of stoppages, the sugar units shall maintain the fresh water consumption records. However, it is noteworthy that the industry breakdown period should be > 6 hours. The same shall be checked from the Daily Manufacturing Record (DMR) to verify the freshwater consumption quantum for that particular period of time.

h. If some day any industry operates at <70% of its crushing capacity, then the record of freshwater consumption for such occasions shall be maintained separately by the industry.

8.7 Digital Water Flow Meter with Telemetry for Groundwater extraction monitoring as per CGWA notification

Technical specifications

1. Specification of Tamper proof Electronic water meter with telemetry

Metering Technology	Ultrasonic or Electromagnetic
Communication type	LAN (for internet connectivity) or LoRa WAN and/or Cellular (GPRS / 3G / 4G)
Tamper proof:	
a) Power source	The meter shall be battery operated or UPS powered supply with provision of power OFF detection. The telemetry system units shall be battery operated or through external power supply. The metering data should be stored in the meter even if the telemetry system is off due to power failure.
b) Sealing	The meter and telemetry system shall have proper mechanical and electronic sealing (through software) arrangement. Any attempt to open the meter or system enclosure should physically damage the tag.
Compliance	The meter shall preferably be manufactured as per ISO 4064: 2014 Standards and shall have IP 68 ingress protection.
Accuracy	The meter shall be of accuracy better than ± 2% for the operating flow range (from 10 % to 100 % of maximum flow rate).
Test certificate	The meter manufacturer shall submit the latest test/calibration certificate of the meter, from Fluid Control Research Institute (FCRI) / National Physical Laboratory (NPL) or any third party laboratory accredited by National Accreditation Board for Testing and Calibration Laboratories (NABL), for every meter.
Parameters to monitor	The meter (since installation of the requisite water meter) shall transmit the following parameters to a secure cloud

	• Timestamp • Cumulative forward flow volume • Cumulative reverse flow volume • Cumulative Net volume • Cumulative pump working hours • Meter serial number • Device last calibration date • Borewell id (Provided by CGWA)
Cloud	The Communication / telemetry data should be directly captured in a secure cloud. The cloud service provider should be empaneled with The Ministry of Electronics and Information Technology (MeitY).
Transmission frequency	The data shall be transmitted minimum 2 times in a day
Battery life	In case of battery operated meters the battery shall run at least for a period of 3 years with 2 transmissions per day. The battery shall be replaceable without any data loss.
Data acquisition	The meter shall be supplied with complete AMR / AMI system with Data Management software. The Data Management Software must be capable of running on a standard PC. The Data Management Software should be cloud based and should have web portal access so that user can view customer data through browser. In addition to above, Data Management Software will be installed on Server placed in Central Data Base/Control Room, and the software may have option for individual customer to view their meter consumption data through Web portal. Consumer, engineer and manager screens shall be available separately. Data Collection Unit shall be capable of taking data from

	meter, pump etc. and should be posted in Data Management Software.
Real-time data to CGWA	The un-tampered data from the secure cloud shall be sent to Central Ground Water Authority (CGWA) real-time data management platform once it is ready. Proper cyber security measures shall be taken in the secure cloud.

2. Installation of meter

Location	The meter shall be installed at the bore-well pump discharge line before any branching and preferably as shown in Figure. 1
Bypassing	There shall be no bypassing of pipe prior to the installed flow meter.
Full flow	The installation of the meter shall ensure the pipe shall have full of water at all times. Sufficient upstream and downstream straight length shall be provided for the meter (Refer to Figure 1.)

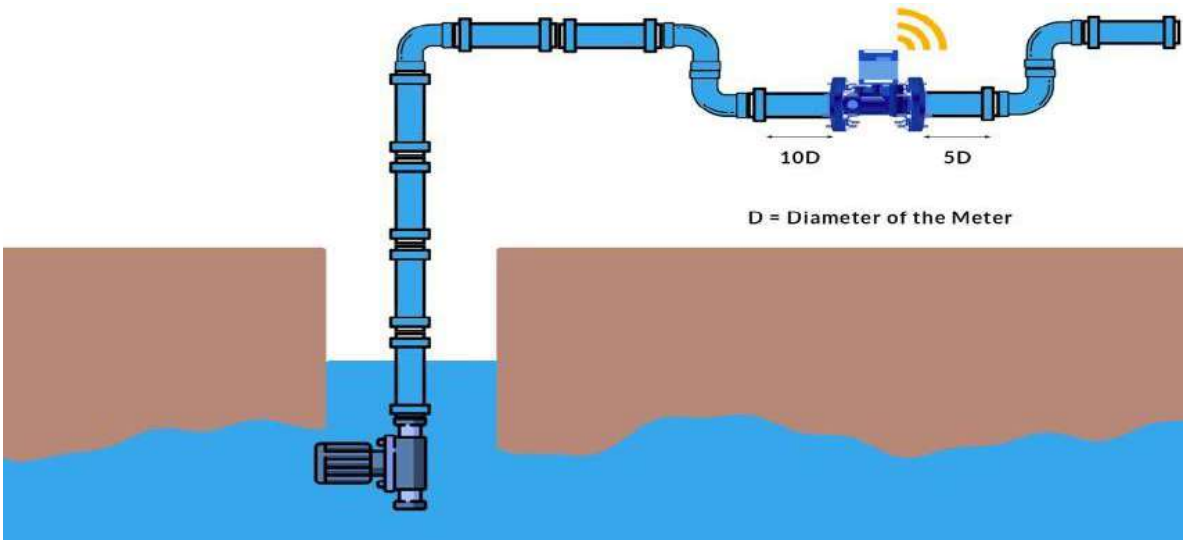


Figure. 1: Installation position of tamper proof flow meter with telemetry at groundwater abstraction structures.

3. Detailed Technical Specifications of Amr / Ami Water Flow Meters

3.1 Specification of flow meter

Flow meters shall meet the following metrological specification:

1. Turndown ratio of 10 or above
2. Accuracy ± 2%
3. Technology: electromagnetic or ultrasonic

3.1.1 Size:

1. DN40 - Flow range: 0.5 lps to 5 lps
2. DN100 - Flow range: 3 to 30 lps
3. DN150 - Flow range: 13 to 130 lps

- Meter performance shall not get affected by external magnetic field, as specified in ISO4064.
- Meters must be able to retain their accuracy, when installed in either horizontal and/or vertical planes.

3.1.2 Material of Construction:

The manufacturer shall provide specific details of materials used for various parts of the meter which must meet the specifications for the material of construction of the individual parts of the meters as per applicable standards (referred above).

- The water meter and accessories shall be manufactured from materials of adequate strength and durability.
- The body of the meter shall be of Brass/Bronze/MS/CI/SS/Engineering Plastic and compact enough to avoid tampering of meter. The manufacturer shall specifically mention in the offer, the material used in manufacturing.
- The materials, which come in contact with the potable water, shall not create a toxic hazard, shall not support microbial growth, and shall not give rise to unpleasant taste, odor or discoloration in the water supply.
- The painting material used should be free from toxic constituents and safe for human uses and should not affect human health (Health Certificate should be attached/provided).
- Each meter should be supplied in separate individual box with its accessories, test/ calibration Certificate (for accuracy parameter) and Guarantee Card for free repair/replacement during the warranty period.

3.1.3 Markings on the Body of the Meter:

- Make/Brand, Size / Nominal Dia.
- Sl. No. / Year of Manufacture, Metrological specifications etc.

3.1.4 Meter indicator

The digital indicator shall be designed in such a way that if the protective glass is broken for a reason or another, the indicator cannot be removed from its place. The protective cover of the indicator shall be made of sturdy glass/PP/PC.

- It shall be of straight reading type.
- No. of digits and verification scale interval shall be as sufficient enough to meet the required accuracy.
- Totalizer shall be made of suitable material required to maintain IP 68 protection class.

3.1.4 Telemetry System

- The AMR/AMI system should have the facility to detect and communicate any abnormalities, i.e. high consumption, tampering etc. along with necessary alarms.
- The system will communicate in real time for battery and tamper alarms, in order to provide relevant monitoring and management data for operational purposes.
- The battery shall be replaceable without any data loss.
- The meters should report an alarm to the server as and when tampered.
- All Water Meter readings should be time stamped.
- The meter should have the capability to detect and record reverse flow separately.
- The meter should be capable of to detect Leak, Zero (No) Flow, High Flow.
- The AMR/AMI should operate even in electrically noisy environments with electromagnetic interference. The AMR/AMI should function even in the presence of high voltage power lines.
- Battery usage has to be indicated at the server. Provision should be provided to replace batteries if required.
- The communication shall be encrypted to avoid tampering.
- The meter should be configurable either using the DTU or from the server.
- Loss of communication should be indicated in the server within 48 hours.
- The meter should be able to log the daily flow data with a timestamp which is supposed to be sent to the cloud via telemetry for at least 2 years.
- In case the telemetry is non-functional because of power cut or weak cellular signals, the meter should be able to store the data and transmit to the cloud as soon as the telemetry system is live.

- This data shall also be used for retrieval in case of any dispute between meter data and online data. 548

3.3 Data Management Software

- The web based Data Management Software must be capable of running on a standard PC compatible with minimum Pentium Processor; in addition, the software must run under Windows XP Professional, Windows Vista, Windows 7 and / or latest version of Windows Operating System and HP Unix, Linux, Solaris, etc.
- The Data Management Software should be cloud base and should have web portal access so that user can view customer data through browser. In addition to above, Data Management Software will be installed on Server placed in Central Data Base / Control Room, and the software may have option for individual customer to view their meter consumption data through Web portal.
    - The Data Management Software shall provide database backup/restore functions and must have real-time data access. The software should be web-enabled and alerts to be provided through email/SMS to the user.
    - The Data Management Software shall post the reading from the communication infrastructure on to appropriate accounts within the Database.
    - The Data Management Software should be able to display all kind of data on screen at any time.
    - The Data Management Software should have capability to add additional customer information and create customizable data fields.

3.4 Lab Testing / calibration:

Testing or Calibration of meters shall be performed at ISO 17025: 2017 accredited laboratory. The accuracy of meter shall be within ± 2 % in the operating range. The meter shall have valid model approval certificate.

The meter shall have model approval from India or abroad. Every meter should be calibrated/ tested for accuracy in the operating flow range (10% to 100%). At least 4-point calibration at 10%, 40%, 70% and 100% of maximum/rated flow shall be performed.

Narendra Mohan
*Former Director, National Sugar Institute, Kanpur
*Expert, Cogeneration Association of India
*Advisor, Deccan Sugar Technologists Association of India
*Member, International Society of Sugarcane & Sugar Technologists
*Life Member, Association of Food Technologists of India
*Life Member, The Sugar Technologists Association of India
*Advisor, Ceylon Sugar Industries (P) Ltd., Sri Lanka

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01.2.2025

To,
M/s Dhampur Sugar Mills Ltd.
6th Floor, Max House, Okhla Industrial Estate Phase-3
New Delhi, New Delhi 110020,

Dear Sir

My opinion in the referred matter is as under:

REFERENCE:

Technical Feasibility of Inter-locking of Effluent Treatment and Air Emission Control System in a Sugar Unit & Distillery

It has been desired to consider and assess technical Feasibility of Inter-locking of Effluent Treatment and Air Emission Control System in a Sugar Unit & Distillery vis a vis the directions of the Hon'ble NGT and conditions being imposed by the SPCB.

Back Ground

National Green Tribunal (NGT) vide order dated 01.09.2021 passed in Original Application no. 539 of 2019 in Adil Ansari vs. Dhampur Sugar Mills Limited & Ors. passed a detailed judgment. The Hon'ble NGT vide the same order gave several directions to comply with, one of the directions was as under-

UPPCB must ensure Interlocking of Pollution Control Devices with production processes (one way but not vice versa) so as to ensure that whenever ETPs/PCDs are intentionally closed, the production also comes to halt.

The Hon'ble Supreme Court has di[illegible] to Monitor the compliances done by the Company to the directions issued by the NGT vide order dated 01.09.2021. The relevant part of the order dated 07.01.2025 is reproduced hereunder.

It is evident from the above that there are certain directions of the National Green Tribunal which have been complied and some directions are not yet complied with. We are of the opinion that it would be appropriate if we direct the Tribunal to monitor the compliances and ensure that its judgment dated 01.09.2021 is fully implemented. After ensuring implicit compliances of the directions, the Tribunal may revisit the directions with respect to payment of compensation and pass such orders as may be necessary.

The Company had already submitted an explanation vide letter dated 29.09.2021 before UPPCB in response to the direction vide letter dated 24.09.2021 of interlocking of Pollution Control Devices with Production processes that sugar production is a continuous process and if the production process is stopped suddenly the sugarcane juice and juice concentrates in the process will clog and it will be very difficult to clean the plant and resume production. Copies of the UPPCB letter and our letter are attached.

OPINION:

It is not the only question of sugar production process being continuous one but also the nature of raw material used for production of sugar i.e. sugarcane. The sugarcane is a perishable crop and deterioration sets in as soon as the sugarcane is harvested from the field. Similarly, sugarcane juice, syrups and various other process intermediates in the sugar unit also deteriorate upon retention. Thus, the sugar units should not be and cannot be equated or kept at par with other industries viz. cement, textile, electrical and electronics and so on. Continuity in operations is a must for sugar units keeping in view the perishable nature of the raw material and process house liquors.

If because of any temporary issue with pollution control devices, the production process is made to stop, it will result in decomposition of process house liquors as reflected from deterioration of bag-able sugar to the extent of almost no commercial use. The loss of sugar due to decomposition, apart from other factors is very much dependent upon the retention time, particularly, due to sucrose i.e. bag-able sugar immediately starts getting inverted the moment Manufacturing Process is stopped. Under these situation stagnated material thus would require removal through deep cleaning of the entire plant before it is to be operated again. This would not only cause huge losses to the sugar unit due to loss of sugar, misc. other losses due to suspension of crushing operations and expenses on

cleaning but the sugarcane available at mill yard and cane centres shall also undergo post-harvest deterioration.

The sugar units cope up with their captive steam and power requirements generating the same through in house boilers and turbo-generating sets. Since bagasse obtained as a result of crushing of the sugarcane is used as fuel in boilers, as soon as the sugarcane crushing is stopped, the generation of bagasse also stops because of which the boiler and consequently turbo-generators are likely to stop making the entire system coming to an stand-still. The restart of the boilers and other equipment takes substantial time and necessitates arrangement of fuel from outside.

The very important aspect related to sugarcane farmers should also be kept in mind while considering the possibilities of interlocking sugar factory operations with the working of pollution control devices. If so considered, sugarcane farmers shall also suffer as the sugarcane harvested by them for supply to sugar unit shall meet the same fate of deterioration viz. loss of weight and sugar, causing them financial losses in terms of sugarcane price per metric ton of sugarcane compared to normal sugarcane. The whole chain from sugarcane supplies to sugar- power production is likely to suffer adversely causing imbalances. Imposition of such regulation which may cause disruptions in the sugarcane supplies, thus, may also cause agitation by the farmers creating law and order issues as well.

Therefore, keeping in view the perishable nature of raw material and many other relevant factors e.g. power generation to meet captive requirements and also to export, necessitating it to be a continuous operation, interlocking of sugar production process in sugar units with pollution control devices seems does not seem feasible.

Moreover, since data related to emissions is regularly transmitted to CPCB/SPCB Servers through OCEMS, in case of any deliberate or accidental stopping of pollution control devices, the position shall be explicitly clear to the CPCB/SPCB enabling them taking any appropriate action as deem fit.

Similarly, Distilleries which by and large produce ethanol using sugarcane juice, thick juice, syrup and other feed stocks, which are all perishable in nature, having unit operations of fermentation, distillation and de-hydration etc., work in a continuous manner as per process requirement. They also establish steam and power generation units so as to meet the captive power requirements. Hence, for the reasons mentioned in case of sugar units, interlocking of pollution control devices with production process does not

seem feasible even for Distilleries in case of temporary break down in the pollution control devices.

It may also be mentioned that even as per the latest issued "Sugar Charter 2.0" there is no provision of Inter-locking of Effluent Treatment Plant and /or Air Emission control System and the Charter 2.0 is silent on this issue meaning thereby no such regulation is required to be imposed.

However, if any such regulation is proposed to be implemented, I personally think that wide circulation of the same and subsequent discussions should be carried out with all the stakeholders.

Thanking you,

Yours faithfully

N. Mohan 01/2/2015

(Narendra Mohan)

Annexure 10 (Contd)

Dhampur Bio Organics Ltd., Unit- Asmoli						
Fly Ash Generation Records (MT)						
Date	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	Remarks
1		48.74	54.98	54.60	43.98	Crushing season 2024-25 start on dated 8.11.2024
2		49.31	55.18	55.39	41.84	
3		50.67	53.35	55.43	43.09	
4		50.05	55.74	54.91	43.33	
5		49.33	55.37	46.80	42.54	
6		30.52	53.28	51.26	41.08	
7		51.60	46.54	55.31	41.02	
8	22.90	53.12	50.39	55.17	43.01	
9	25.04	50.99	54.79	47.83	41.46	
10	28.82	51.69	54.40	43.28	42.87	
11	35.54	52.54	54.96	43.53	43.09	
12	46.48	39.98	54.74	43.06	43.11	
13	48.02	52.69	54.80	44.58	43.45	
14	49.91	55.13	53.79	44.24	41.28	
15	48.85	54.91	53.82	43.99	40.41	
16	47.07	55.12	54.98	44.16	41.55	
17	52.38	55.56	55.39	44.94	40.57	
18	52.40	55.21	45.01	44.16	41.82	
19	54.00	54.38	56.22	41.43	42.08	
20	54.81	53.44	55.96	47.78	27.95	
21	55.77	46.59	55.69	47.81	14.57	
22	52.24	53.24	55.71	42.58	7.72	
23	53.72	55.09	55.85	43.77		
24	49.74	55.57	52.81	43.27		
25	54.92	56.02	52.77	42.66		Crushing season 2024-25 end on dated 19.03.2025 & Boiler shutdown on 22.03.2025
26	52.58	55.72	53.44	41.86		
27	51.63	55.39	54.07	42.92		
28	51.56	55.15	53.04	43.97		
29	49.69	55.54	53.46			
30	43.88	55.46	53.83			
31		55.06	53.67			

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S.N.	FARMER CODE	FARMER NAME	FATHER NAME	VILLAGE NAME	TOKEN NO	SLIP NO	TOKEN	DATE	NET WT. (Qtl)
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Dhampur Bio Organics Limited

Date: 05.02.2025

To,

The Member Secretary,
State Environment Impact Assessment Authority (SEIAA), Uttar Pradesh
Directorate, Govt of U.P.
Dr Bhim Rao Ambedkar Paryavaran Parisar,
Vineet Khand I, Gomti Nagar, Lucknow - 226010

Subject: Request for Amendment in Environmental Clearance Conditions

Reference: EC Identification No. EC23B025UP167115 dated: 22th June 2023

Dear Sir/Madam,

In reference to the above-mentioned subject, we would like to inform you that we have obtained the Environmental Clearance with EC Identification No. **EC23B025UP167115** dated: 22th June 2023 for our project, expansion of existing Sugar unit from 9000 TCD to 14000 TCD along with 41 MW Co gen power at village & Block – Asmoli, Tehsil & District – Sambhal (UP) of M/s Dhampur Bio Organics Limited, Unit – Asmoli, Sugar Division, under the provisions of the Environmental Impact Assessment (EIA) Notification, 2006.

Our company is committed to maintaining environmental sustainability and ensuring compliance with all regulations. However, after the issuance of the EC, certain conditions need to be amended to accommodate the changes that have arisen in the project execution plans and technical requirements.

The specific conditions that we seek to amend are as follows:

1. **Specific Condition (ii)**: PP shall install CAAQMS.
2. **Specific Condition (iii)**: Disposal of fly ash shall be done within the premises.

Above specific conditions are not feasible for us to implement within premises hence we are submitting pointwise justification for amendment in EC conditions.

We respectfully request you to review these conditions and consider the amendment based on the following justifications:

Sr.no.	Conditions	Justification
1	PP shall install CAAQMS	Due to the seasonal nature of the sugar industry using biomass as fuel, installing a CAAQMS is not justifiable as the plant is inactive during off-seasons,

		leading to underuse and unnecessary costs for operation and maintenance. CAAQMS systems are expensive to install and maintain year-round, making them less cost-effective compared to a stationary AAQ monitoring system, which provides a more economical solution for air quality monitoring during operational and non-operational months. In place of CAAQMS, AAQ Monitoring Station will be identified as per CPCB guidelines and regular monitoring will be done at the same. In addition to above, quarterly third party analysis (NABL certified laboratory) will be conducted as per the conditions.
2	Disposal of fly ash shall be done within the premises.	Fly ash disposal will not be possible within the premises, as it requires a large space for Storage & disposal. Since Sugar unit fly ash having good demand in farmers for land filling & manure, it will be provided to the farmers on need basis.

We assure you that all necessary steps will be taken to continue complying with the environmental norms, and these amendments will further strengthen our commitment to responsible environmental management.

We kindly request you to process this amendment request at your earliest convenience and issue the revised Environmental Clearance for our project.

Thank you

Your's Faithfully

M/s Dhampur Bio Organics Limited,
Unit – Asmoli, Sugar Division

Authorised Signatory

ग्राम पंचायत- सैंधरी

वि0ख0- असमोली,, जनपद- सम्भल, 30 प्र0

श्रीमति शाहिस्ता
ग्राम प्रधान
पत्नी-श्री राहिद हुसैन
मो0-9927209165, 7900906752
निवास/कार्यालय
ग्राम- सैंधरी तेलीपुरा
जनपद- सम्भल

पत्रांक.....

दिनांक.....

अनापत्ति प्रमाण पत्र

मैं शाहिस्ता, ग्राम प्रधान सैन्धरी, वि0ख0 असमोली, जिला सम्भल घोषणा करती हूँ कि ग्राम के तालाब जिसके खसरा नं0 132, 262, 302, 327, 332, 349, 435, 495, 504, 510, 545, 578, 779, 852, 1066, 1247ख, 1252, 1261ख, 1326, 434/1401, 940/1402, 438, 400, 900ख, 440ख, 1250, 440क, 412ख, क्षेत्रफल 5.7280 हेक्टेयर को सर्वश्री घामपुर बायो ऑर्गेनिक्स लि0, असमोली, डिवीजन– शुगर, तहसील व जिला– सम्भल को रेनवाटर हार्वेस्टिंग के लिए गोद दिया गया है।

इसके साथ यह भी घोषित किया जाता है कि उक्त तालाब को किसी अन्य कम्पनी को न ही गोद दिया गया है और न ही दिया जायेगा।

शाहिस्ता
ग्राम प्रधान
ग्राम पंचायत सैंधरी
वि० खं० असमोली (सम्भल)
घोषणाकर्ता

आज दिनांक 05/04/2025 को यह सत्यापित किया जाता है कि उक्त घोषणा सत्य व विश्वसनीय है।

शाहिस्ता
ग्राम प्रधान
ग्राम पंचायत सैंधरी
वि० खं० असमोली (सम्भल)
घोषणाकर्ता

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ग्राम पंचायत, परियावली, वि. खण्ड सम्भल

फातमा अन्जुम
ग्राम प्रधान
ग्राम परियावली, सम्भल
FATMA ANJUM

फा[illegible]
प्रधान पति
मो0 9758567860 / 8958264786

पत्रांक :.....

दिनांक :.....

अनापत्ति प्रमाण पत्र

मैं फातमा अन्जुम, ग्राम प्रधान परियावली, वि0ख0 सम्भल, जिला सम्भल घोषणा करती हूँ कि ग्राम के तालाब जिसके खसरा नं0 207, 215 घ, 243, 244, 245, 246, 247, 347, 447, 718, 720, 836छ क्षेत्रफल 1.7990 हेक्टेयर को सर्वश्री धामपुर बायो आर्गेनिक्स लि0, असमोली, डिवीजन– शुगर, तहसील व जिला सम्भल को रेनवाटर हार्वेस्टिंग के लिए गोद दिया गया है।

इसके साथ यह भी घोषित किया जाता है कि उक्त तालाब को किसी अन्य कम्पनी को न ही गोद दिया गया है और न ही दिया जायेगा।

Fatma Anjum
घोषणाकर्ता

ग्राम [illegible]गन
ग्रा. प. परियावली
वि. खण्ड सम्भल

आज दिनांक 07/04/2025 को यह सत्यापित किया जाता है कि उक्त घोषणा सत्य व विश्वसनीय है।

घोषणाकर्ता

Fatma Anjum
ग्राम [illegible]गन
ग्रा. प. परियावली
वि. खण्ड सम्भल

Scanned with OKEN Scanner

अनापत्ति प्रमाण पत्र

मैं नौशाद ग्राम प्रधान पाली, वि0ख0 असमोली, जिला सम्भल घोषणा करता हूँ कि ग्राम के तालाब जिसके खसरा नं0 4, 9, 94, 119, 275, 329, 361, 365, 366क, 737 क्षेत्रफल 3.1030 हेक्टेयर को सर्वश्री धामपुर बायो आर्गेनिक्स लि0, असमोली, डिवीजन– शुगर, तहसील व जिला सम्भल को रेनवाटर हार्वेस्टिंग के लिए गोद दिया गया है।

इसके साथ यह भी घोषित किया जाता है कि उक्त तालाब को किसी अन्य कम्पनी को न ही गोद दिया गया है और न ही दिया जायेगा।

घोषणाकर्ता

आज दिनांक 03/04/2025 को यह सत्यापित किया जाता है कि उक्त घोषणा सत्य व विश्वसनीय है।

नौ0 नौशाद
प्रधान
ग्राम पंचायत पाली
वि0ख0 असमोली (सम्भल)
9837716413

घोषणाकर्ता

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GRAM PANCHAYAT - SENDHRI

Village Block - Asmoli, District - Sambhal, Uttar Pradesh

Mrs. Shahista
Village Head of Sandhri
Wife of Mr. Rashid Hussain
Mobile Number -
9920308165, 197001946752

Residence/ Office Village -
Raudhari Telipura
District Sambhal

Letter No._____ Dated _____

NO OBJECTION CERTIFICATE

I, Shahista, Village Head of Sandhri, Block Asmoli, District Sambhal, affirm that the village pond with Khasra Nos. 132, 262, 302, 327, 332, 349, 435, 495, 504, 510, 545, 578, 779, 852, 1066, 1247, 1252, 1261, 1326, 434/1401, 940/1402, 438, 400, 900B, 440B, 1250, 440A, 412, area 5.7280 hectares have been adopted for rainwater harvesting by Shri Dhampur Bio Organics Ltd., Asmoli, Division Sugar Tehsil and District – Sambal.

It is further declared that the said pond has neither been nor will be adopted by any other company.

Sd/-
Head of Village
Gram Panchayat Sendhri
Block Asmoli (Sammal)
DECLARANT

It is confirmed today, 05.04.2025, that the above assertion is true and reliable.

Sd/-
Head of Village
Gram Panchayat Sendhri
Block Asmoli (Sammal)
DECLARANT

//TRUE COPY//

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GRAM PANCHAYAT, PARIYAWALI, SAMBHAL BLOCK

Fatma Anjum,
Village Head,
Village Pariyawali,
Sambhal

Farooq Abdullah,
Husband Head
Mob
758567860/8958264786

Letter No._____ Date_____

NO OBJECTION CERTIFICATE

I, Fatma Anjum, Village Head, Pariyawali, Sambhal Block, Sambhal District, affirm that the village pond, with Khasra Nos. 207, 215G, 243, 244, 245, 246, 247, 347, 447, 718, 720, 836G, with an area of 1.7990 hectares, has been adopted by Dhampur Bio Organics Ltd., Asmoli, Division-Sugar, Tehsil and District Sambhal, for rainwater harvesting.

It is also declared that the said pond has not been and will not be adopted by any other company.

Sd/-
DECLARANT

It is verified on this day i.e. 07.04.2025, that the above assertion is true and reliable.

DECLARANT
Sd/-
Head of Village
Village. Parayavali
V. Khand Sambhal

WATER AUDIT REPORT

AS PER THE GUIDELINES OF CGWA

MINISTRY OF JAL SHAKTI

AT

M/S DHAMPUR BIO ORGANICS LIMITED
(UNIT: ASMOLI, DIVISION: SUGAR)

VILLAGE- ASMOLI, TEHSIL & DISTRICT– SAMBHAL, UTTAR PRADESH - 244304

BY

Dr Yogendra Kumar Verma

Certified Water Auditor, CGWA

February, 2024

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Dr Yogendra Kumar Verma places on record its sincere thanks to the Management of M/s Dhampur Bio Organics Limited (Unit: Asmoli, Division: Sugar) for entrusting the task of conducting Water Audit assignment at Dhampur Bio Organics Limited (Unit: Asmoli, Division: Sugar) in line with CGWA Notification dated 24/09/2020.

We are grateful to Mr. Himanshu Kumar Mangalam (Unit Head) and his team for his continuous support and guidance during the execution of the assignment. We also extend our sincere thanks to other team members for their full-fledged support in execution of the assignment.

Dr Yogendra Kumar Verma and his audit team is indebted to the EHS department team and process team of M/s Dhampur Bio Organics Limited (Unit: Asmoli, Division: Sugar) for showing keen interest in the water audit and the wholehearted support and cooperation during the conduct of the field study, without which the study would not have steered to its successful completion.

It is well worthy to mention that the efforts being taken and the enthusiasm shown by all the personnel towards water and energy conservation are really admirable.

Dr Yogendra Kumar Verma

Certified Water Auditor, CGWA

CERTIFICATE

भारत सरकार / Government of India
जल शक्ति मंत्रालय / Ministry of Jal shakti
जल संसाधन, Dept. of Water Resources, River
नदी विकास एवं गंगा संरक्षण विभाग / Development & GR
केन्द्रीय भूमिजल बोर्ड / Central Ground Water Board

राजीव गांधी राष्ट्रीय भूमि जल प्रशिक्षण एवं अनुसंधान संस्थान, रायपुर
Rajiv Gandhi National Ground Water Training & Research Institute, Raipur

Certificate

Certificate No: RGI/WA/2023 - 12

This is to certify that Mr./Ms. Dr. Yogendra Kumar Verma S/o. Lakhan Lal Verma has successfully completed the training course w.e.f. 20.03.2023 to 26.04.2023 and is certified as Water Auditor to prepare the Water Audit Reports for industries as a part of compliance condition of the No. Objection Certificate (NOC) issued by Central Ground Water Authority, Ministry of Jal Shakti, Govt. of India for ground water abstraction as per Gazette Notification dated 24.09.2020.

Validity Period : Five years from the date of Issue
Date of issuance : 19/06/2023

पाठ्यक्रम निदेशक	क्षेत्रीय निदेशक	सदस्य
Course Director	Regional Director	Member (East)
आरजीएनजीडब्ल्यूटीआरआई	आरजीएनजीडब्ल्यूटीआरआई	आरजीएनजीडब्ल्यूटीआरआई
RGNGWT&RI	RGNGWT&RI	RGNGWT&RI

website : cgwb.gov.in, cgwa-noc.gov.in

CERTIFICATE

I certify that following:

- The report is based on the data collected at site during Audit and information provided by M/s Dhampur Bio Organics Limited (Unit: Asmoli, Division: Sugar) Village- Asmoli, Tehsil & District– Sambhal, Uttar Pradesh – 244304. The data collection has been carried out diligently and truthfully.
- All data measuring devices used by the team are in good working condition, have been calibrated and have valid calibration certificate from the authorized approved agencies and tampering of such devices has not occurred.
- All reasonable professional skill, care and diligence have been taken in preparing the water audit report and the contents thereof are a true representation of the facts and figures.

ABBREVIATIONS

A	Ampere
AC	Alternating Current
Avg.	Average
CGWA	Central Ground Water Authority
CGWB	Central Ground Water Board
CWC	Central Water Commission
KL	Kilolitre
KV	Kilovolt
kVA	Kilo Volt Ampere
KVAr	Kilo Volt Ampere Reactive
kW	Kilowatts
kWh	Kilowatt Hour
Lit	Liters
LPCD	Liter Per Capita per Day
LPM	Liters per minute
M orm	Meter
Max.	Maximum
mbgl	Meters below ground level
Min.	Minimum
MT	Metric Ton
No.	Number
OHT	Overhead Tank
PF	Power Factor
RO	Reverse Osmosis
SWC	Specific Water Consumption
LPS	Low Pressure Switch
HPS	High Pressure Switch

ETP	Effluent Treatment Plant
V	Voltage
WDS	Water distribution station.
WTP	Water Treatment Plant
RWH	Rain Water harvesting

EXECUTIVE SUMMARY

Given the above scenario of prevailing resource challenge, accelerating over time, progressive management of M/s Dhampur Bio Organics Limited (Unit: Asmoli, Division: Sugar) Asmoli is very keen to do water audit of their premises. To get benefit of water saving projects, management of M/s Dhampur Bio Organics Limited (Unit: Asmoli, Division: Sugar) Asmoli awarded the task of water audit of its premises to Dr Yogendra Kumar Verma (Certified water auditor from CGWA).

This report is an attempt of Dr Yogendra Kumar Verma to provide an overview of the water distribution system and water usage at Dhampur Bio Organics Limited (Unit: Asmoli, Division: Sugar). The report also highlights the major water sources, consumption area, wastewater treatment facilities and available water saving opportunities in the plant. A set of recommendations which will assist in improving water efficiency has also been highlighted in this report. This report has emerged after a detailed water audit conducted by Dr Yogendra Kumar Verma in plant from 17.01.2024 to 19.01.2024.

<table>
<tr><td>Project Title</td><td>Dr Yogendra Kumar Verma
Report Number:</td></tr>
<tr><td>Water Audit at
M/s Dhampur Bio Organics Limited (Unit: Asmoli, Division: Sugar)
Village- Asmoli, Tehsil & District– Sambhal, Uttar Pradesh - 244304</td><td>CGWA/AE/WA/2023-24/061</td></tr>
<tr><td colspan="2">Client</td></tr>
<tr><td colspan="2">M/s Dhampur Bio Organics Limited (Unit: Asmoli, Division: Sugar)</td></tr>
<tr><td colspan="2">Contact Person:</td></tr>
<tr><td colspan="2">Mr. Himanshu Kumar Mangalam (Unit Head)</td></tr>
<tr><td>Date of Audit</td><td>Source of Water</td></tr>
<tr><td>17.01.2024 to 19.01.2024</td><td>Ground Water from Bore wells</td></tr>
<tr><td>Date of this Report</td><td>Date of Approval</td></tr>
<tr><td>28.01.2024</td><td>18-02-2024</td></tr>
<tr><td>Work Carried out by: (Team Composition)</td><td>Dr Yogendra Kumar Verma
Mr Satyendra Singh (Associate)</td></tr>
<tr><td>Final Report Approved</td><td>Date : 18-02-2024</td></tr>
</table>

- M/s Dhampur Bio Organics Limited (Unit: Asmoli, Division: Sugar) group is engaged in manufacture of sugar, cogeneration and ethanol. The plant is located in an area of Village Asmoli, Tehsil & District– Sambhal, Uttar Pradesh - 244304. The plant has NOC to withdraw **920 KL/day** of water from three (3) bore wells. At present, approximately **423 KL/day** (from January-2023 to December-2023) of water is used for the industrial process, domestic, utility and drinking purpose only, of which all water is met from three (3) bore wells. The stage of groundwater development in Asmoli Block as reported by CGWB (assessment year: 2020) is **82.66 %** and Block wise Ground Water Resource Assessment – 2020 by CGWB puts Asmoli Block in the category of Semi Critical. Asmoli Block has been identified as non - notified block by CGWA.

- M/s Dhampur Bio Organics Limited (Unit: Asmoli, Division: Sugar) has only one source of water to the plant - Ground water through three (3) no. of Bore wells which are being operating continuously to meet the demand of the plant. Each source and bore well isfitted with individual electromagnetic flow meter.

- The total water available at Dhampur Bio Organics Limited (Unit: Asmoli, Division: Sugar) is **84,519 KL/year i:e 423 KL/day (Jan-2023 to Dec-2023**), considering @ 200 days). The water consuming areas are utility which accounts for **70.29% (59,411KL/year)**, domestic which accounts for **15.01 % (12,681 KL/year**), process (chemical preparation) which accounts for **11.01 % (9,305 KL/year)** and leakages/unaccounted loss is **3.69 %** which account for **3122 KL/year**.

- The total ground water abstraction from Jan-2023 to Dec-2023 is **84,519 KL/year i:e, 423 KL/day**, this shows that Water Audit at M/s Dhampur Bio Organics Limited (Unit: Asmoli, Division: Sugar) at village- Asmoli, Tehsil & District– Sambhal, Uttar Pradesh – 244304 comply with the NOC for ground water withdrawal of **920 KL/day**.

- The audit team calculated the per KL cost of Raw water. The Rs./KL cost of Raw water is **3.0** From Jan-2023 to December-2023. The expense towards energy consumption at bore well is considered for calculating raw water cost.

- Water Audit at M/s Dhampur Bio Organics Limited (Unit: Asmoli, Division: Sugar) at village- Asmoli, Tehsil & District– Sambhal, Uttar Pradesh - 244304 has done calibration of the Bore Well and ETP Inlet and Outlet flow meters installed in the plant. Calibration

Certificates are attached as **Annexure-A.**

- During study, measurements of Cooling Tower, Temperature/relative humidity of supply air, inlet/outlet temperature of water and power consumption of fans has been carried out. The Process colling Tower is giving satisfactory results, however the effectiveness of Power Plant Turbine Cooling Tower is in the lower side. The CT effectiveness is dependent on the ambient conditions, but despite that, the effectiveness should normally in the range of 60% & above. The evaluated CT effectiveness was in the range from **45% to 57%.**

- The audit team took the flow and pressure readings from their own instruments and found that the pressure gauge reading of Bore Well # 2 was having error. Here we recommend replacing the pressure gauge at the discharge line of Bore Well # 2.

- During measurements, it was observed that BW # 2 is consuming **51kW** against the rated power of **45kW**. Here we recommend checking the pump to avoid any overheating or pump malfunctioning.

- The Audit team calculated the Rs. /KL cost of RO Water. The Rs. /KL cost of RO water for the year 2023 is **36.336 Rs/KL.** The expenses towards energy consumption at RO and PSF, chemical costs and manpower cost are considered for calculating the total cost for treatment.

- The Audit team calculated the Rs. /KL cost of ETP Water. The Rs. /KL cost of ETP water for the year 2023 is **34.76 Rs/KL** the expenses towards energy consumption at ETP plant, chemical costs and manpower cost are considered for calculating the total cost for treatment.

- The average treated water in ETP (Jan-2023 to Dec-2023) is **1563 KL/Day**. ETP plant has an installed capacity is **3000 KLD;** whereas the treated average wastewater is 52.1 **% of** the rated capacity. Therefore, the effective capacity utilization of ETP is **52.1 %.**

- The maximum (worst case) ground water requirement for the Dhampur Bio Organics Limited (Unit: Asmoli, Division: Sugar) is **890 KLD** however plant has obtained the NOC of water quantity **920 KLD** from three Tube wells and NOC for the same has been granted, and this total requirement of fresh water is fulfil by Ground water through 03

Numbers of bore-wells within the plant site. The ground water withdrawal will be within 890 KLD only, and should meet out by all three tubes well.

- **Tube Well # 1:** Plant has a NOC to withdraw **60,000 KL/year** from tube well # 1 with the Maximum Allowable Rate of Withdrawal of **100 m3/hr** and Running hour not exceeding 4hrs.
- **Tube Well # 2:** Plant has a NOC to withdraw **60,000 KL/year** from tube well # 2 with the Maximum Allowable Rate of Withdrawal of **100 m3/hr** and Running hour not exceeding 4hrs.
- **Tube Well # 3:** Plant has a NOC to withdraw **18000 KL/year** from tube well # 3 with the Maximum Allowable Rate of Withdrawal of **40 m3/hr** and Running hour not exceeding 3hrs.

- The NOC has been issued by UPGWD (Uttar Pradesh Ground Water department) vide letter no **1. NOC013653. 2. NOC039759. 3. NOC034938.** No new/additional ground water abstraction structures to be constructed for this purpose without prior approval from UPGWD. As per data provided by the plant, the total ground water abstraction in the year 2023 is **84,519 KL/year** (**BW#1 = 36,431 and BW#2 = 35,148 and BW#3= 12,940) i:e 423 KL/day (considering @ 200 days**) which is less than the NOC of **920 KLD** issued to plant. This shows that Dhampur Bio Organics Limited (Unit: Asmoli, Division: Sugar) comply with the NOC for ground water withdrawal of **920 KLD** i.e.; 138000.0 KL/year. NOC copy for Tube Well # 1, 2 & 3 are attached as **Annexure-B**.

- No change of location, design, rate of withdrawal and pumping device in respect of the proposed well as indicated at SL (2) and (3) of this certificate shall be made without prior permission of the Competent Authority. Any deviation in this regard shall lead to cancellation of this authorization. Audit team has checked the running parameters of both the bore wells. Both the bore wells are operated as per the NOC.

- For the purpose of measuring and recording the quantity of ground water extracted, every said user shall affix digital water flow meters (conforming to BIS/ IS standards) having telemetry system in the abstraction structure, which record rate and quantum of extraction, at outlet of pumping devices and it shall be presumed that the quantity recorded by the meter has been extracted by the said user, until the contrary is proved. The rate of extraction of ground water from the well shall not exceed to the recorded rate from water

Meters. Dhampur Bio Organics Limited (Unit: Asmoli, Division: Sugar) has installed digital flow meter with telemetry system on the existing Three (03) borewell and maintaining the data on daily basis.

- Construction of piezometers and installation of digital water level recorders with telemetry shall be mandatory for user. Depth and zone tapped of piezometer should be commensurate with that of the pumping well. The data, obtained from digital water level recorders shall be made available to UPGWD (Central Ground Water Authority) on monthly basis. Piezometer is abore well /tube well used only for measuring the water level by lowering the tape/ sounder or automatic water level measuring equipment. It is also used to take water sample for water quality testing whenever needed. Since the plant has NOC to withdraw 920 KLD from Three tube wells, Dhampur Bio Organics Limited (Unit: Asmoli, Division: Sugar) must install two piezometer with telemetry system. Plant has installed two (02) Piezometer with telematory system to execute the ground water regime. Here we recommend that plant must install another piezometer with telemetry system to comply from the NOC received from CGWA. Dhampur Bio Organics Limited (Unit: Asmoli, Division: Sugar) must follow the above mentioned points.

- The ground water quality has to be monitored twice in a year during pre-monsoon (May/June) and post-monsoon (October/November) periods. Quality may be got analyzed from NABL approved lab (Environmental and Technical Research Centre). Besides, one sample (1 lt. capacity bottle) to the concerned Director, Ground Water Department, Uttar Pradesh, for chemical analysis. The audit team has checked and verified all the water quality test reports. All of the reports comply with the environmental factors related to water uses and discharge. (Attached separately in **Annexure-B**).

- A Permanent display board should be installed at piezometer/Tube wells site for providing the location, piezometer/ tube well number, depth and zone tapped of piezometer/tube well for standard referencing and identification. M/s Dhampur Bio Organics Limited (Unit: Asmoli, Division: Sugar) has provided display boards on all the locations as per the NOC.

- There is **21.4 hectare** uncovered area and road in Dhampur Bio Organics Limited (Unit: Asmoli, Division: Sugar). Water recharge through roof top within premises - **18644**

KL/Year. Total water recharge by adoption of pond of area – 2.21 Ha in nearby village **119356 KL/Year.**

- Dhampur Bio Organics Limited (Unit: Asmoli, Division: Sugar) has developed a well mentioned drip irrigation system in the factory command area in keeping the view of ground water saving and better yield of the crops. The drip irrigation technology is highly efficient in water saving as well as higher production of the crops. M/s Dhampur Bio Organics Limited (Unit: Asmoli, Division: Sugar) started his journey of drip irrigation from 2020 with 80 hectare area and now in 2023 it is reached upto 448 hectare. **The water saving from 2021 to 2023 is 6429456 KL**. This show that the management of Dhampur Bio Organics Limited (Unit: Asmoli, Division: Sugar) is very keen in water saving.

- During the site, survey leakages were found at some of the locations. All the leakages were quantified with the help of beaker or any other form. During the field trials, **3122 KLD** water leakages were found at **09** different locations. Approximately **1174 KL/year of**water can be saved by arresting all the leakages in the plant. It is recommended to stop all the leakages points by taking necessary action.

- The audit team has conducted the flow sample measurement on existing taps installed in toilets wash basin of General Toilets near B/W-1, Mill House, Canteen, DM Plant, ETP Toilets to identify the water saving potential in faucets. It is observed that average flow of existing tap/faucets at toilet washbasin faucet is **7 Liters per Minute (LPM)**. Faucets flows can easily be reduced without affecting the comfort of the water user. Therefore, based on sample flow measurement, we recommend installing nozzle spray flow regulator faucets in General Toilets near bore well # 1, Mill House Washroom, DM Plant Washroom and Mill office Toilets faucets. This will result in impressive savings of around 50-60 percent of faucets water use. Total **10 nos.** of wash basins faucets in General Toilets near bore well # 1, Mill House Washroom, DM Plant Washroom and Mill office Toilets were found where average flow is 7 Liters Per Minute (LPM). We recommend installing nozzle spray flow regulator faucets in these 07 wash basin faucets to reduce the flow from **7LPM to 3.5LPM**. The daily water used in these 10 wash basin is **0.18KL/Day.** It is assumed that by replacing old faucets with new nozzle spray flow regulator faucets, **0.09 KL/Day** of water can be saved in hand wash. Total **34 KL/year** of water will be saved by adding nozzle spray flow regulator faucets on existing 07 taps. The resultant benefit in terms of energy saving workout is **Rs. 102/year** with an estimated investment of **Rs. 2000**

with the simple payback period of **235 months.**

- The audit team has conducted the flow sample measurement on existing taps installed in toilets wash basin of DM Plant hand wash to identify the water saving potential in faucets.It is observed that average flow of existing tap/faucets at toilet washbasin faucet is **9.5 Liters Per Minute (LPM)**. Faucets flows can easily be reduced without affecting the comfort of the water user. Therefore, based on sample flow measurement, we recommend installing nozzle spray flow regulator faucets in DM Plant hand wash faucets. This will result in impressive savings of around 50-60 percent of faucets water use. Total **01 nos.** of wash basins faucets in DM Plant hand wash were found where average flow is 9.5 Liters Per Minute (LPM). We recommend installing nozzle spray flow regulator faucets in these 01 wash basin faucets to reduce the flow from **9.5LPM to 4.75LPM**. The daily water used in this 01 wash basin is **0.035KL/Day.** It is assumed that by replacing old faucets with new nozzle spray flow regulator faucets, **0.017 KL/Day** of water can be saved in hand wash. Total **6.4 KL/year** of water will be saved by adding nozzle spray flow regulator faucets on existing 01 taps. The resultant benefit in terms of energy saving workout is **Rs. 19/year** with an estimated investment of **Rs. 200** with the simple payback period of **125 months.**

- The audit team has conducted the flow sample measurement on existing taps installed in canteen wash basin of Mill house hand wash to identify the water saving potential in faucets. It is observed that average flow of existing tap/faucets at canteen washbasin faucet is **12 Liters per Minute (LPM)**. Faucets flows can easily be reduced without affecting the comfort of the water user. Therefore, based on sample flow measurement, we recommend installing nozzle spray flow regulator faucets in Mill house hand wash faucets. This will result in impressive savings ofaround 50-60 percent of faucets water use. Total **02 nos.** of wash basins faucets in Mill house hand wash were found where average flow is 07 Liters Per Minute (LPM). We recommend installing nozzle spray flow regulator faucets in these 02 wash basin faucets to reduce the flow from **12LPM to 6.0LPM**. The daily water used in this 02 wash basin is **0.0392KL/Day.** It is assumed that by replacing old faucets with new nozzle spray flow regulator faucets, **0.019 KL/Day** of water can be saved in hand wash. Total **7.154 KL/year** of water will be saved by adding nozzle spray flow regulator faucets on existing 01 taps. The resultant benefit in terms of energy saving workout is **Rs. 22/year** with an estimated investment of **Rs. 400** with the simple payback period of **223 months.**

- The audit team has conducted the flow sample measurement on existing taps installed in main **canteen wash basin** to identify the water saving potential in faucets. It is observed that average flow of existing tap/faucets at toilet washbasin faucet is **1.7 Liters per Press (Push)**. Faucets flows can easily be reduced without affecting the comfort of the water user. Therefore, based on sample flow measurement, we recommend installing nozzle spray flow regulator faucets in main canteen hand wash. This will result in impressive savings of around 50-60 percent of faucets water use. Total **04 nos.** of wash basins faucets in main canteen were found where average flow is 1.7 Liters Per Press (Push). We recommend installing nozzle spray flow regulator faucets in these 02 wash basin faucets to reduce the flow from 1.7 Liter per Press (Push) to 0.84 Liter per Press (Push). The daily water used in these 04 wash basin is **0.289KL/Day**. It is assumed that by replacing old faucets with new nozzle spray flow regulator faucets, **0.14 KL/Day of** water can be saved in hand wash. Total **52 KL/year** of water will be saved by adding nozzle spray flow regulator faucets on existing 04 taps. The resultant benefit in terms of energy saving workout is **Rs. 158/year** with an estimated investment of Rs. 800 with the simple payback period of **37 months**.

- The audit team has conducted the flow sample measurement on existing taps installed in Wash basin in ETP to identify the water saving potential in faucets. It is observed that average flow of existing tap/faucets at canteen washbasin faucet is 10 Liters Per Minute (LPM). Faucets flows can easily be reduced without affecting the comfort of the water user. Therefore, based on sample flow measurement, we recommend installing nozzle spray flow regulator faucets in Wash basin in ETP faucets. This will result in impressive savings of around **50-60** percent of faucets water use. Total 01 nos. of wash basins faucets in Wash basin in ETP were found where average flow is **12 Liters** Per Minute (LPM). We recommend installing nozzle spray flow regulator faucets in these 01 wash basin faucets to reduce the flow from **10LPM** to **5.0LPM**. The daily water used in this 01 wash basin is **0.084KL/Day**. It is assumed that by replacing old faucets with new nozzle spray flow regulator faucets, **0.042 KL/Day** of water can be saved in hand wash. Total 1**5.33 KL/year** of water will be saved by adding nozzle spray flow regulator faucets on existing 01 taps. The resultant benefit in terms of energy saving workout is **Rs. 46/year** with an estimated investment of **Rs. 200** with the simple payback period of **52 months**.

- The audit team has conducted the survey of toilets available in the Cane yard, Material Gate Toilet, Guest House. There are total 45 flush tanks installed in toilet, having old

system of flushing by pressing push button having water consumption of 6 Litre/Flush. A dual-flush toilet is a variation of the flush toilet that uses two buttons or handles to flush different levels of water. A significant way to save water in buildings is to replace single-flush toilets with dual flush toilets. The standard dual-flush toilets use six Litres of water on full and three Litres on a half- flush. Replacing old toilets will result to a reduction of toilet water consumption. More cost- effective results can be achieved by replacing only the toilet trim system. The total water consumption in Flush Tanks is **109.5 KL/year**, this can be reduced by **50%**. Here we recommend installing dual flush system in toilets flush tanks. It is assumed that by reducing the flow with dual flush cistern, 50% i.e. **0.15 KL/Day** of water can be saved in flush tanks. Total **54.75 KL/year** of water will be saved by adding dual type flush tanks in existing 45 tanks. The resultant benefit in terms of energy saving workout is Rs. **165/year** with an estimated investment of **Rs. 45000**with the simple payback period of **3272 months**.

- The audit team has conducted the survey of toilets available in the General Toilets near **account office, admin office, admin VP sir block, General Toilet near Borewell-1** and There are total 12 flush tanks installed in toilet, having old system of flushing by pressing push button having water consumption of 8.0 Liter/Flush. Here, we recommend installing a dual-flush toilet in the washroom. Replacing old system of flushing with dual flush toilet will result to a reduction of toilet water consumption. The total water consumption in Flush Tanks is **43.8 KL/year**, this can be reduced by 50%. Here we recommend installing dual flush system in toilets flush tanks. It is assumed that by adding dual flush cistern, 50% i.e. **0.12 KL/Day** of water can be. Total **43.8 KL/year** of water will be saved by adding dual type flush tanks in existing 12 tanks. The resultant benefit in terms of energy saving workout is **Rs. 132/year** with an estimated investment of **Rs. 12,000** with the simple payback period of **1090 months.**

- The audit team has conducted the survey of toilets available in ETP Plant, Sugar Lab Toilet Boiling House, Boiler Toilet .There are total 08 flush tanks installed in toilet, having old system of flushing by pressing push button having water consumption of 11 Litre/Flush.. Here, we recommend installing a dual-flush toilet in the washroom. Replacing old system of flushing with dual flush toilet will result to a reduction of toilet water consumption. The total water consumption in Flush Tanks is **80.3 KL/year,** this can be reduced by 50%. Here we recommend installing dual flush system in toilets flush tanks. It is assumed that by adding dual flush cistern, 50% i.e. **0.11 KL/Day** of water can

be saved. Total **40.15 KL/year** of water will be saved by adding dual type flush tanks in existing **08** tanks. The resultant benefit in terms of energy saving workout is **Rs. 120/year** with an estimated investment of **Rs. 8000/-** with the simple payback period of **800 months**.

The Audit is focused on improving water usage efficiency and identifying water Conservation opportunities. Accordingly, the field study and data collection for the said water audit was carried out by the Dr Yogender Kumar Verma and his audit team. This report discusses the water balance and various water saving options derived on the basis of observation made, data collected and their analysis. Summary of Water Audit findings are presented in the below table.

Sr. No.	Section/Area	Key Observations	Recommendations	Annual Water Savings (KL/year)	Annual Monetary Savings (Rs.)	Investment (Rs.)	Pay-back Period (Months)
I	**Total Bore well Water Intake**			84,519			
II	**Bore well Water Saving Achievable**			1427			
Option 1: Short Term Benefits							
1	Total Leakage in Plant	Arrest all leakage points	We recommend arresting all the leakage points. Arresting these leakage points total 1173 KL/year of water will be saved.	1173	3519	-	-
Option 2: Long Term Benefits							
2	General Toilets Near B/W-1, Mill House, Canteen, DM Plant, ETP	Total 10 nos. of wash basins faucets in General Toilets near General Toilets Near B/W-1, Mill House, Canteen, DM Plant, ETP Toilets were found where average flow is 7 Liters Per Minute (LPM).	We recommend installing nozzle spray flow regulator faucets in these 10 wash basin faucets to reduce the flow from 7 LPM to 3.5 LPM. The daily water used in these 10-wash basins is 0.18 KL/Day.	34	102	2000	235
3	DM Plant Hand Wash	Total 01 nos. of wash basins faucets in DM	We recommend installing nozzle spray flow regulator faucets in these	7	19	200	125

		Plant Hand Wash were found where average flow is 9.2 Liters Per Minute (LPM)	01 wash basin faucets to reduce the flow from 9.5LPM to 4.7LPM. The daily water used in this 01 wash basin is 0.02KL/Day				
4	Mill House Hand	Total 02 nos. of wash basins faucets in Mill House Hand Wash were found where average flow is 12 Liters Per Minute (LPM)	We recommend installing nozzle spray flow regulator faucets in these 01 wash basin faucets to reduce the flow from 12LPM to 6.LPM. The daily water used in this 01 wash basin is 0.04KL/Day.	7	22	400	223
5	Wash basin of ETP	Total 01 nos. of wash basins faucets in Wash basin OF ETP were found where average flow is 10 Liters Per Minute (LPM)	We recommend installing nozzle spray flow regulator faucets in these 01 wash basin faucets to reduce the flow from 10LPM to 5.0LPM. The daily water used in this 01 wash basin is 0.04KL/Day.	15	46	200	52
6	Canteen Hand wash	Total 04 nos. of wash basins faucets in main canteen were found where average flow is 1.7 Liters Per Press (Push).	We recommend installing nozzle spray flow regulator faucets in these 04 wash basin faucets to reduce the flow from 1.7 Liter per Press (Push) to 0.83 Liter per Press (Push). The daily water used in these 04 wash basin is 0.289KL/Day.	52	158	800	60
7	Total no of flush tank in Cane yard, Material Gate Toilet, Guest House	total 45 flush tanks installed in toilet, having old system of flushing by pressing push button having water consumption of 6	Here, we recommend installing a dual-flush toilet in the washroom. this can be reduced by 50%.	55	165	45000	3272

		Litre/Flush..					
8	Total no of flush tank in account office, admin office ,admin VP sir block, General Toilet Near Borewell-1	There are total 12 flush tanks installed in toilet, having old system of flushing by pressing push button having water consumption of 8 Litre/Flush.	The total water consumption in Flush Tanks is 87.6 KL/year, this can be reduced by 50%. Here we recommend installing dual flush system in toilets flush tanks.	44	132	12000	1090
9	Total no of flush tank in ETP Plant, Sugar Lab Toilet Boiling House, Boiler Toilet	There are total 08 flush tanks installed in toilet, having old system of flushing by pressing push button having water consumption of 11 Liter/Flush.	The total water consumption in Flush Tanks is 80.3 KL/year, this can be reduced by 50%. Here we recommend installing dual flush system in toilets flush tanks.	40	120	8000	800
TOTAL				**1427**	**4283**	**68600**	**5622**

- Water balance across the plant has been successfully achieved. Total consumption - Bore well is 423 KL/day (January-2023 to December-2023).
- For Bore well Water, savings of 1173 KL/year (1.39 %) is achievable in the short term and 254 KL/year (0.3 %) is achievable in long term benefits.
- In monetary terms ~ Rs. 4,283/annum savings can be achieved.

CHAPTER 1
INTRODUCTION

1. INTRODUCTION

Human activities consume and pollute lot of water. At a global scale, most of the water use occurs in agricultural production, but there are also substantial water volumes consumed and polluted in the industrial and domestic sectors (WWAP, 2009).

Global changes like population growth, climate variability, ever-expanding industrialization and urbanization — often combined with pollution — severely affect water availability and lead to chronic water shortages in a growing number of regions. India has been successful in the past to meet such water requirements for different usages with a phenomenal development of water resources. However, preserving the quality and availability of fresh water resources has now become a pressing environment challenge.

Water is an essential precondition for life, and according to the UN it is a human right to have access to clean water. However, in India millions of people are living without direct access to safe water and based on the rapid population growth coupled with the fact that the water reserve is finite, it will be a very valuable and scarce resource within only a few years. In this light, there is an urgent need for decision makers to act in order to improve the conditions for effective use and supply of water to the Indian people now and in the future.

Under the Indian Constitution and in our federal democratic set up drinking water comes within the domain of the State Governments (Provincial Governments). In fact, the 73rd Constitutional Amendment has gone a step forward. It mandates that responsibility for drinking water and sanitation services should be with Local Governments. Various States in India are at different stages of giving effect to this Constitutional mandate.

The Ministry of Urban Development has formulated Service Level Benchmarks (SLBs) in 2008 and circulated the same to the States for adoption. The SLBs include water conservation and management practices such as continuous water supply, 100% metering of water supply, sustainable tariffs and reduction in leakages to a level of 15% to 20%.

The National Water Policy – 2012 focuses on the need for publishing water accounts and water audit reports indicating leakages and pilferages. The policy recommends systems to evolve benchmarks for water uses for different purposes, i.e., water footprints, and water auditing to ensure efficient use of water.

National Water Mission (NWM) has been established by the Government of India with the objective of –conservation of water, minimizing wastage and ensuring its more equitable distribution both across and within States through integrated water resources

development and management‖. The Government of India has also launched a Centrally Sponsored Scheme for Repair, Renovation and Restoration (RRR) of water bodies, which has multiple objectives like comprehensive improvement and restoration of water bodies thereby increasing tank storage capacity, improved water use efficiency and increased availability of drinking water.

With its continuously declining per capita water availability (from about 5,177 m3 in 1951 to 1,654 m3 in 2007), India stands water stressed and is close to being categorized _water scarce'. Water demand in India is expected to grow annually by 2.8 per cent to reach 1,500 bcm (by 2030) while the current supply is only about half (viz., 744 bcm). The Government of India, in its Intended Nationally Determined Contribution (INDC) submitted to UN Framework Convention on Climate Change (UNFCCC) in October,2015, has committed to improve the water use efficiency by 20%, through regulatory mechanisms with differential entitlements and pricing. It further emphasizes the need to focus on integrated water resource management through water conservation, wastewater minimization, etc.

The notification dated 24/09/2020 from CGWA, all industries abstracting ground water in excess of 100KL/day shall be required to undertake annual water audit through CII/FICCI/NPC/PHDCCI certified auditors and submit water audit reports within three months of completion of the same to CGWA.

Water audit is an effective management tool for minimizing losses, optimizing various uses and thus enabling considerable conservation of water. Thus, Dhampur Bio Organics Limited (Unit: Asmoli, Division: Sugar) at Village- Asmoli, Tehsil & District– Sambhal, Uttar Pradesh - 244304 has entrusted Dr Yogendra Kumar Verma for conducting water audit in their Sugar Unit premises.

This report discusses the existing water scenario of Dhampur Bio Organics Limited (Unit: Asmoli, Division: Sugar) and its potential water savings and how the basic water audit approach has been applied to water conservation in line with the guidelines of CGWA.

RATIONALE FOR WATER AUDIT

Water audit determines the amount of water lost from the water network/distributionsystem due to seepage, evaporation/leakage and other reasons such as theft, unauthorized or illegal withdrawals from the systems. Water audit improves the knowledge and documentation of the distribution system, and better understanding ofwhat is happening to the water after it leaves the source point. Comprehensive water audit gives a detailed profile of the distribution system and water users, thereby facilitating easier and effective management of the resources with improved reliability. It helps in correct

diagnosis of the problems faced in order to suggest optimum solutions. This leads to reduced water losses; improved financial performance; improved reliability of supply system; enhanced knowledge of the distribution; efficient use of existing supplies; better safeguard to public health and property; improved public relations; reduced legal liability and reduced disruption etc. thereby improving level of service to customers. It is thus an effective tool for realistic understanding and assessment of the present performance level and efficiency of the service and the adaptability of the system for future expansion & rectification of faults during modernization.

Steps of Water Audit

Water Audit includes water supply and usage study, process study, system audit, discharge analysis and preparation of water audit report.

Water Supply and Usage Study

Water audit comprises preparation of layout of water sources, distribution network, and service/delivery points to water users and return flow of waste or excess water. The layout should contain locations and capacities of flow measurement devices installed at key points, sizes of different channels, and fittings in the water supply system, locations and particulars of flow control devices and history sheets of all measuring and control devices including pipes and fittings etc.

Dr Yogendra Kumar Verma (Certified Water Auditor) has carried out the water supply and usage study at Dhampur Bio Organics Limited (Unit: Asmoli, Division: Sugar), to understand the present water utilization pattern and projecting future requirement. Dr Yogendra Kumar Verma (Certified Water Auditor) also carried out a review of sustainable sources of water through rainwater harvesting and possible wastewater recycling at Dhampur Bio Organics Limited (Unit: Asmoli, Division: Sugar)

Process Study

Flow measurement devices were installed at all strategic points to calculate the water consumption at Dhampur Bio Organics Limited (Unit: Asmoli, Division: Sugar) in various activities such as supply to the Processing Units, Utilities, Domestic and Gardening.

Water quality of the distribution system needs to be monitored regularly at strategic points to find out the level and nature of contaminants present in the supplied water. The Dhampur Bio Organics Limited (Unit: Asmoli, Division: Sugar) has conducted the water quality test reports for Bore well (Raw Water), DM and RO Water. Audit team reviewed all test reports and found acceptable as the results are in compliance to various standards as

required by SPCB.

Dr Yogendra Kumar Verma has carried out flow, pressure and power measurement of the bore well pumps to calculate the total water supplied to the different areas of the plant to understand the quantity of water received from ground and feed to the plant area. Accordingly, discharge from various processing units and estimation of losses was also assessed.

System Audit

The current water usages and systems for water use are process, utility, gardening and domestic purpose need to be studied to check their operational efficiency and level of maintenance. The scope for any modification or up-gradation will depend on the status of existing systems. Measurement methodology from the intake point of the system through various sub-systems to the ultimate user points needs to be verified periodically for its suitability, efficiency and accuracy. Bulk metering should be done at the source, process area, water discharge etc. This will help in identifying the reaches of undue water wastage. The domestic wastewater return flows need to be studied for conformity to environment standards, possibility of recovery of valuable by-products and the opportunity for recycling of waste water.

Dr Yogendra Kumar Verma has carried out physical inspection of water distribution network/system of Bore Well Pumps, supply to various areas of the Plant, Domestic, ETP and Gardening to get their per day water consumption to arrive at per capita water consumption in Dhampur Bio Organics Limited (Unit: Asmoli, Division: Sugar).

Discharge Analysis

M/s Dhampur Bio Organics Limited (Unit: Asmoli, Division: Sugar) has installed **one ETP of 3000 KLD**, to treat the factory effluent generated in the plant. The audit team has conducted the study of ETP. The domestic effluent is being treated through the existing Sewage Treatment Plant.

Water Audit Report

A water audit can be accomplished on the basis of water allotted for a service and water actually utilized for that service. After assessing the loss of water and the efficiency of the system, steps needed for utilization of recoverable water loss and reuse may be listed.

An effective water audit report may be purposeful in detection of water losses and improve efficiency of the system. Water audit of the system should be undertaken at regular intervals, at least on an annual basis. Dr Yogendra Kumar Verma water audit explains the

losses of water in system and various management approaches for Dhampur Bio Organics Limited (Unit: Asmoli, Division: Sugar) at village- Asmoli, Tehsil & District– Sambhal, Uttar Pradesh – 244304.

BRIEF DESCRIPTION ABOUT THE PLANT

M/s Dhampur Bio Organics Limited (Unit: Asmoli, Division: Sugar) is a sugar cane crushing unit with capacity 12500 TCD sugar Plant at village: Asmoli, Tehsil: & Distt: Sambhal (U.P.). DBOL was the first company in India to manufacture sulphurless refined Sugar. DBOL has the ability to produce refined sugar both during the season wherein the sugar from the sugarcane is first used to manufacture raw sugar and subsequently refined to produce refined Sulphur less sugar and in off-season when coupled with cogeneration DBOL can use raw sugar procured from outside to produce refined sugar.

Process Description of M/s Dhampur Bio Organics Limited (Unit: Asmoli, Division: Sugar)

Cane arriving and weighing:-

Every farmer within the command area of the Mill is provided with a calendar, which tells him when he can expect a Mill Supply Ticket (Purchy), against which he will deliver the sugarcane. He then harvests the cane and transports it either in a bullock cart or tractor trolley to the mill. Cane is also bought at the mill's own centers within the command area. This cane is then transported in trucks. Cane is weighed using an electronic weigh bridge and unloaded into cane carriers.

Cane Milling and Juice extraction:-

Cane is then prepared for milling by knives and hammers. Sugarcane juice is then extracted by pressing the prepared cane through mills. Each mill consists of three rollers: Extracted juice mixed with water is measured and sent to the boiling house for further processing. Residual bagasse is sent to boilers for use as fuel for steam generation.

Raw juice Defecation:-

Raw juice is heated and then defecated with milk of lime. The defecated juice is then further heated and sent to clarifier for continuous settling. The settled mud is filtered by vacuum filters and filtered juice is returned to be further processed while the Oliver cake is sent out.

Purification of juice — clarification and evaporation:-

The clear juice is evaporated to a syrup stage, raw pans for further concentration and sugar grain formation. Crystals are developed to a desired size and the crystallized mass is then dropped in the crystallizers to exhaust the mother liquor of its sugar as much as possible. This is then centrifuged for separating the raw sugar from molasses. The molasses is re-

boiled for further crystallization.

Thus, the original syrup is de-sugarised progressively (normally one time) till finally, a viscous liquid is obtained from which sugar can no longer be recovered economically. This liquid, which is called final molasses, is sent to the distillery for making alcohol.

The Raw sugar thus is separated from molasses in the centrifuge and sent to Melt Clarification Section (MCS).

Melt clarification System:-

The raw sugar is then dissolved to make a syrup (about percent by weight solids), which is clarified by the addition of phosphoric acid and calcium hydroxide that combine to precipitate calcium phosphate. The calcium phosphate particles entrap some impuritiesand absorb others, and then float to the top of the tank, where they are skimmed off.

After any remaining solids are filtered out through DBF, the clarified syrup is decolorized, ion-exchange resin and Fine liquor is transfer to Refinery passing through bag filter (5 micron) and 12000 gauze magnet.

Refinery Crystallization:-

The Fine liquor is then concentrated to super saturation and repeatedly crystallized under vacuum to produce white refined sugar.The sugar crystals are separated from the mother liquor by centrifuging.

Sugar Drying & Bagging:-

After centrifuging, Drying is accomplished first by drying the sugar in a FBD (Fluid bed dryer). after drying the sugar passes through different sieves at grader and then finished product is send to large Sugar silos, after that sugar is packed in 50 kg bags with inner 400 gauge liner filled with auto sugar dispenser after filling heat sealed the liner and double stitched the bags. After stitching the bags transfer to warehouse for storage through conveyor belt.

Warehouse and Dispatch:-

Sugar lots/batches stored in warehouse in protected condition. Sugar dispatched after checking the sugar lot and vehicle by QC personal (bags pass through Metal detector before loading for pharmaceuticals grade sugar supplies).

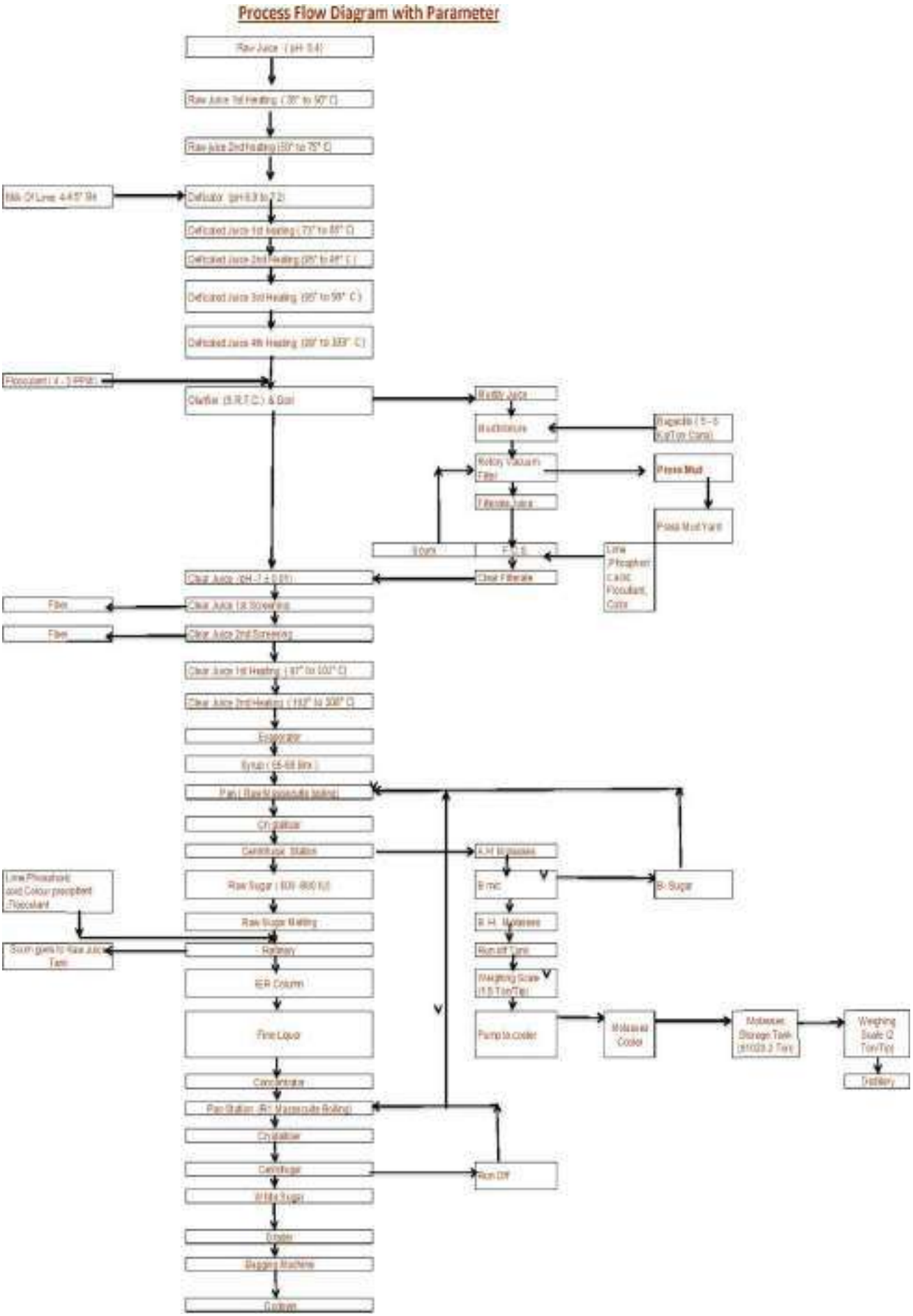


Figure- 1, Process Flow Chart of Sugar Manufacturing

CHAPTER 2

SCOPE OF WORK

The main objective of the study was to identify the water uses & water saving opportunities and to demonstrate water conservation at M/s Dhampur Bio Organics Limited (Unit: Asmoli, Division: Sugar), Scope of work of the study includes the following:

- On-site training and discussion with facility manager and personnel
- Water system analysis and Quantification of base line water map
- Water use Monitoring and measurements using pressure and flow meter.
- Quantification in efficiencies and leaks in the water system
- Quantification of water quality load sand discharges
- Quantification of variability in flow sand quality parameters
- Strategies for water treatment and re use or erect use
- Development of detailed water circuit diagram and water balance of the facility
- Mapping of water quality requirement to develop 'recycle 'and 'reuse' opportunities
- Developing Water consumption and wastewater generation pattern
- Estimating Specific water use and conservation potential
- Develop & maintain monthly water extracted from bore wells, water level, water quality etc.
- Calculation of Rainwater Harvesting Potential for the site and assessment of the existing structures
- Evolving Water saving opportunities with method of implementing the proposal with
- Description and figures related to water management schemes
- Investment required for water saving schemes/Cost Benefit Analysis
- Submission of water audit report & its presentation at site (if required)

Following opportunities would also be assessed for Industries for water conservation:

- Setting up of norms for water budgeting
- Modernization of industrial process to reduce water consumption
- Recycling water with circulating cooling system
- Cooling water approach which can result in five folder diction in blow down whencompared to traditional chemical treatment
- Reduction in reuse of de-ionized water by eliminating some plenum flushes, converting from a continuous flow to a intermittent flow system and improving control on the use
- Use of waste water for gardening
- Proper processing of effluents to adhere to the norms of disposal

Dr Yogendra Kumar Verma has been entrusted to conduct Water Audit of Dhampur Bio Organics Limited (Unit: Asmoli, Division: Sugar). In determining the water audit scope, Dr Yogendra Kumar Verma has considered the extent and boundaries of the Installations. This report aims at portraying the water audit details and the outcome along with recommendations for Dhampur Bio Organics Limited (Unit: Asmoli, Division: Sugar)

CHAPTER 3
METHODOLOGY OF STUDY

METHODOLOGY OF THE STUDY

The following step by step methodology and approach were adopted while carrying out the Water Audit at Dhampur Bio Organics Limited (Unit: Asmoli, Division: Sugar). Dr Yogendra Kumar Verma team visited Dhampur Bio Organics Limited (Unit: Asmoli, Division: Sugar) from **17-01-2024 to 19-01-2024** for the field measurement and conducting the audit. The broad methodology adopted for the Water Audit at Dhampur Bio Organics Limited (Unit: Asmoli, Division: Sugar) is furnished below.

- Preliminary discussions with plant personnel and observations in all water-consuming areas.
- Data collection through discussions, past records, specifications.
- Field studies in each of the areas involving:
  - ✓ Performance trials.
  - ✓ Measurement of flow parameters, pressure, power wherever possible using portable instruments such as ultrasonic flow meter, pressure gauge and power analyzer.
- Identification of water conservation options on short, medium & long terms.
- Identification of Investment grade projects in the plant for detailed analysistowards implementation
- Preparation, discussion and submission of report to the management.

The study focused on improving water use efficiency and identifying water saving opportunities. The analysis included simple payback calculations where investments are required to be made to implement recommendations, to establish their economic viability.

The audit study made use of various portable instruments for carrying out various measurements and analyses. Dr Yogendra Kumar Verma has a wide array of latest, sophisticated, portable, diagnostic and measuring instruments to support our energy audit investigations and analyses. The specialized instruments that were used during the water audit include:

- Ultrasonic water flow meter
- Pressure Gauge
- Load Manager

During the audit, there was continuous interaction between the audit team and facility personnel, to ensure that the suggestions made are realistic, practical and implementable to allow for possible concurrent implementation. The broad methodology adopted for the

Water Audit at Dhampur Bio Organics Limited (Unit: Asmoli, Division: Sugar) is furnished below.

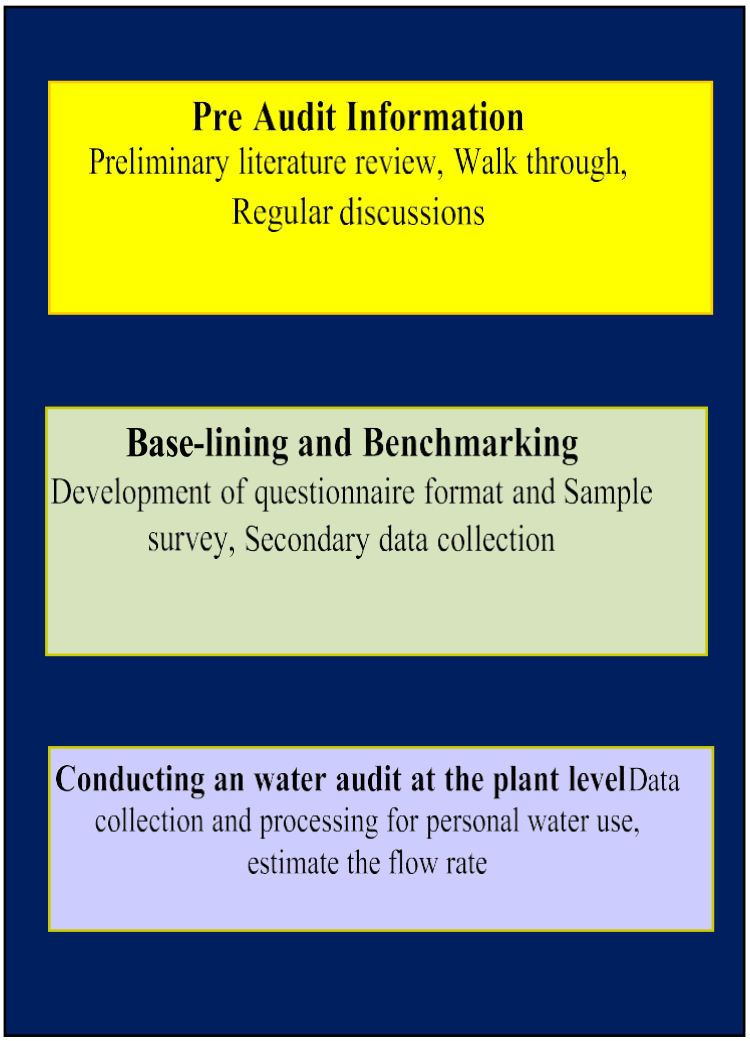
PRE AUDIT INFORMATION

- Preliminary literature review of concepts and methodologies related to water audit for utility, facilities and households.
- Walk through the entire Plant to understand the nature of water uses and the systems installed in the plant.
- Discussion with the administrative officers, pump operators, housekeeping and kitchen employees on the various water uses during the day and the source of water.

BASE-LINING AND BENCHMARKING

The water audit for Dhampur Bio Organics Limited (Unit: Asmoli, Division: Sugar) included both primary and secondary data collection for various identified water uses. Primary data collection included the following components:

- Development of questionnaire format for individual water use, process area, utility, domestic and gardening.
- Sample Survey of Dhampur Bio Organics Limited (Unit: Asmoli, Division: Sugar) office staff to estimate individual water consumption on sanitary and drinking purposes based on questionnaire format.
- Flow rate calculation from the taps flow rates and number of all water using fixtures/ equipment was also undertaken.
- Flow rate calculation andrunning hours of bore wells to calculate the total ground water consumption.



- Secondary data collection included compilation of number of staff along with their duration of stay.

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- Collecting records of water pumped to the overhead and underground tanks and average running hours of all pumps etc. to estimate actual supply.

CONDUCTING A WATER AUDIT AT THE PLANT LEVEL

- The data collection including raw water, utilities, domestic water etc was done on the basis of actual consumption.
- The data for all the above uses was calculated for varying time period for M/s Dhampur Bio Organics Limited (Unit: Asmoli, Division: Sugar) to calculate per capita use.

CHAPTER 4
ASSESSMENT OF WATER USAGES

ASSESMENT OF PRESENT WATER USAGE

Plant Water Consumption Trends (Last 3 Years)

M/s Dhampur Bio Organics Limited (Unit: Asmoli, Division: Sugar) has only one source of water to the plant i:e ground water through three (03) no. of Bore wells which are being operating continuously to meet the demand of the plant. Each source and bore well is fitted with individual meter.

The Ground water after extraction is Groundwater after extraction is supplied to various areas such as WTP for treatment, Softener plant for process, utility, and domestic consumption such as hand wash, toilets, and canteen. The water consumption pattern for last three (3) years at all the consumption areas is shown below:

Table 1, Water Consumption Trend (January-2021 to December-2021)

Months	Total Water Withdrawal from Bore well-1 (KL)	Total Water Withdrawal from Bore well-2 (KL)	Total Water Withdrawal from Bore well-3 (KL)	Total Bore well Water Consumed in Utility (KL)	Total Bore well Water Consumed in Process (Chemical Preparation (KL)	Total Bore well Water Consumed in Domestic (KL)
Jan	0	9857	859	8181	1281	842
Feb	0	10056	945	8346	1307	926
Mar	0	9467	1004	7858	1231	984
April	9905	0	774	8221	1288	759
May	5718	0	677	4746	743	663
Jun	2443	0	649	2028	318	636
July	2238	0	665	1858	291	652
Aug	2455	0	632	2038	319	619
Sep	2316	0	650	1922	301	637
Oct	2881	0	707	2391	375	693
Nov	0	13049	941	10831	1696	922
Dec	0	12881	1124	10691	1675	1102
Total	**27,956**	**55,310**	**9,627**	**69111**	**10825**	**9434.5**

Table 2, Water Consumption Trend (January-2022 to December-2022)

Months	Total Water Withdrawal from Bore well-1 (KL)	Total Water Withdrawal from Bore well-2 (KL)	Total Water Withdrawal from Bore well-3 (KL)	Total Bore well Water Consumed in Utility (KL)	Total Bore well Water Consumed in Process(Chemical Preparation (KL)	Total Bore well Water Consumed in Domestic (KL)
Jan	0	13177	1138	10936.91	1713.01	1115
Feb	11661	0	1034	9678.63	1515.93	1013
Mar	12576	0	1185	10438.08	1634.88	1161
Apr	10477	2067	1303	10411.52	1630.72	1277
May	0	1393	915	1156.19	181.09	897
Jun	0	0	842	0	0	825
Jul	0	0	893	0	0	875
Aug	0	0	880	0	0	862
Sep	0	0	805	0	0	789
Oct	837	0	814	694.71	108.81	798
Nov	11616	0	943	9641.28	1510.08	924
Dec	12461	0	1032	10342.63	1619.93	1011
Total	**59,628**	**16,637**	**11,784**	**63,300**	**9,914**	**11548**

Table 3, Water Consumption Trend (January-2023 to December-2023)

Months	Total Water Withdrawal from Bore well-1 (KL)	Total Water Withdrawal from Bore well-2 (KL)	Total Water Withdrawal from Bore well-3 (KL)	Total Bore well Water Consumed in Utility (KL)	Total Bore well Water Consumed in Process (Chemical Preparation (KL)	Total Bore well Water Consumed in Domestic (KL)
Jan	12662	0	1097	10509.46	1646.06	1075
Feb	11428	0	1093	9485.24	1485.64	1071
Mar	88	12293	1321	10276.23	1609.53	1295
Apr	0	9946	1301	8255.18	1292.98	1275
May	0	829	1203	688.07	107.77	1179
Jun	0	115	1224	95.45	14.95	1200
Jul	0	0	1225	0	0	1201
Aug	0	0	987	0	0	967
Sep	0	0	836	0	0	819
Oct	0	0	885	0	0	867
Nov	5286	5229	877	8727.45	1366.95	859
Dec	6967	6736	891	11373.49	1781.39	873
Total	**36,431**	**35,148**	**12,940**	**59,411**	**9,305**	**12681.2**

OBSERVATION

- 423 KL/day from (Jan-2023 to December-2023), considering 200 days of bore well water is being obtained from existing Bore wells for drinking/domestic and industrial purpose. From the above table it can be seen, that the major water requirement is from November to May months and from June to October the ground water is used only for domestic purposes.

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WATER SOURCES, WHICH SHOULD INCLUDE RAIN WATER, GROUNDWATER & OTHER SOURCES

The main source of drinking and other water usage at M/s Dhampur Bio Organics Limited (Unit: Asmoli, Division: Sugar) is water received from ground through three (03) bore-well (submersible pump) located in the plant area. The details of bore well pumps and their locations are mentioned below.

Table 4 Rated Details and Location of Bore well Pumps

Sr. No.	Type of Structure	Year of Construction	Bore well Depth (meter)	Location	Mode of lift	HP of Pump	Rated Flow (m3/hr)	Max. Running Hrs.
1	Bore Well-1	01-04-2007	60	Near power house	Submersible pump	40	100	4
2	Bore Well-2	02-04-2007	60	Near Boiling house	Submersible pump	40	100	4
3	Bore Well-3 (Domestic)	03-04-2007	60	Near Colony	Submersible pump	15	40	3

4.3. WATER SUPPLY & DISTRIBUTION DETAILS

A water network diagram provides a schematic (simplified) representation of facility's water distribution system from the source or point of entry (to the facility) to points of water consumption. In Dhampur Bio Organics Limited (Unit: Asmoli, Division: Sugar) there is Three (03) source of water i:e ground water from three (03) bore wells.

Bore well # 1,2 & 3 to GLR Tank: Bore well no 1 & 02 bore wells are used to transfer the ground water to GLR tank having storage capacity of 20 KL. From Bore well # 3 a tapping is made to provide the total domestic water to plant. From GLR Tank the water is pumped to MGF of capacity 30 m3/hr and 50 m^3/hr. From the MGF the water is transferred to RO plant of capacity 30 m^3/hr and 50 m^3/hr respectively.

RO Plant: Permeate of this RO is transferred to DM Storage tank having combined capacity of 80 KL. The reject of this RO is used in Ash handling plant. After treatment in DM the DM water is used in boiler makeup.

Effluent Treatment Plant: To treat the sugar factory effluents, plant has installed an ETP having design capacity of **3000 KLD.** The sugar unit ETP treated water is being gainfully utilized in the irrigation of factory own green belt and farmers land/field through close pipeline network in accordance with the irrigation plan submitted to UPPCB.

WATER BALANCE

The assessment team has reviewed the water supply and consumption as well as the losses in the water distribution network in the plant. The water balance diagram of the system is given in below table and figure:

Table 5
Water Balance of M/s Dhampur Bio Organics Limited (Unit: Asmoli, Division: Sugar) (Jan - 2023 to Dec - 2023)

Sr. No.	Particulars	KL/Year
Bore well Water available in Plant		
1	Total Water Extracted from Bore well # 1	36431
2	Total Water Extracted from Bore well # 2	35148
3	Total Water Extracted from Bore well # 3	12940
4	**Total Water Available for Plant**	**84519**
Total Ground Consumed in Plant		
5	Total Bore well Water Consumed in Co-gen (Utility) (KL)	59411
6	Total Bore well Water Consumed in Process (Chemical Preparation (KL)	9305
7	Total Bore well Water Consumed in Domestic (KL)	12681
8	**Total Water Consumed in Plant =((59411+9305+12681)= 81397))**	81397
9	**Total Leakage/Unaccounted Loss in Bore well Water = (84519-81397= 3122)**	**3122**
ETP		
10	Total ETP Inlet Water	3,18,617
11	Total ETP Outlet Water	3,12,499

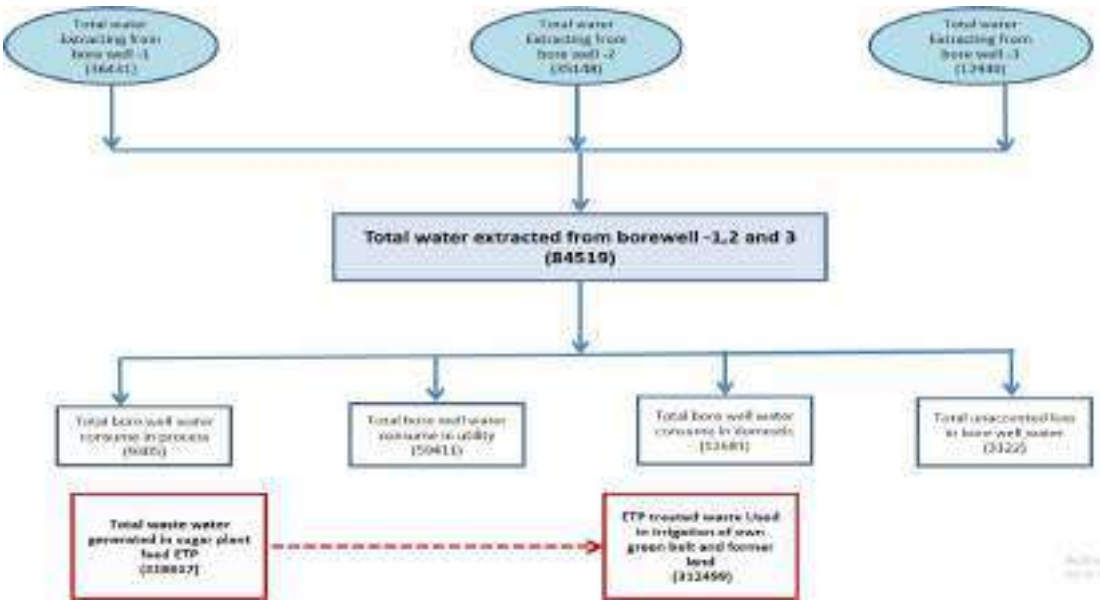


Figure 2 Water Balance Diagram of DBOL, (Unit: Asmoli, Division: Sugar)

It is evident from the above water balance diagram is that the total water available at M/s Dhampur Bio Organics Limited (Unit: Asmoli, Division: Sugar) is **84519KL/year i:e 423 KL/day (Jan - 2023 to Dec-2023, considering @ 200 days)**. The water consuming areas are utility which accounts for **70.24%** (**59411KL/year),** domestic which accounts for **15.01%** (**12681 KL/year),** process (chemical preparation) which accounts for **11.01% (9305 KL/year)** and leakages/unaccounted loss is **3.69** (**3122 KL/year)**.

From figure 3, it is seen that the total ground water abstraction from Jan-2023 to Dec-2023 is **84519KL/year i:e 423 KL/day**, this shows that Dhampur Bio Organics Limited (Unit: Asmoli, Division: Sugar) comply with the NOC for ground water withdrawal of **920 KL/day**.

WATER METERING & MONITORING SYSTEM

Monitoring is the most important prerequisite for efficient water management. Thus, in the water supply network, it is necessary to have a robust system of monitoring. During the audit, the available flow meters were identified, and their working conditions were checked.

Measurement at different locations through Ultrasonic Flow meter

Dr Yogendra Kumar Verma team measures the flow for all the flow meters installed in the plant with the help of ultrasonic flow meter to check any variation in flow meter reading. All flow meters were giving accurate results. Data captured with Ultrasonic Flow meter and Meter installed at the plant is shown in below table:

Table 6 Measurement at Different Location through Ultrasonic Flow Meter

Sr.	Location of Flow Meter	Auditor flow meter reading	Plant Flow Meter reading	% Error	Type
1	Bore well No. 1 Reading	100.5	102	-1.49%	Digital
2	Bore well No. 2 Reading	99.4	98	1.41%	Digital
3	Bore well No.-3 Reading	40.8	41	-0.49%	Digital
4	ETP Inlet Flow Meter Reading	98.5	98	0.51%	Digital
5	ETP Outlet Flow Meter Reading	104.4	105	-0.57%	Digital
6	ETP RO Permeate Flow meter Reading	25.2	25	0.79%	Digital
7	ETP RO Inlet Flow Meter Reading	35.5	36	-1.41%	Digital
8	DM plant RO-30 Flow Meter Reading	40.3	40	0.74%	Digital
9	DM plant RO-50 Flow Meter Reading	70.3	70	0.43%	Digital

OBSERVATION

- From the above table it is seen that the % error is 0.87 %. The accuracy of flow meter may vary ± 2 %. Therefore, this variation is within the permissible limit.

Area Wise Water Consumption in Plant

The break up for water consumption in different area is provided in below tables and bar charts

Table 7 Area Wise Water Consumption in the Plant Jan-2023 to Dec-2023

Area of Water Consumption	Quantity (KL/year)	Percentage (%)
Total Bore well Water Consumed in Co-gen (Utility) (KL)	59411	70.29 %
Total Bore well Water Consumed in Process (Chemical Preparation (KL)	9305	11.01 %
Total Bore well Water Consumed in Domestic (KL)	12681	15.01 %
Total Leakage/unaccounted Loss in Bore well Water (KL)	3122	3.69 %

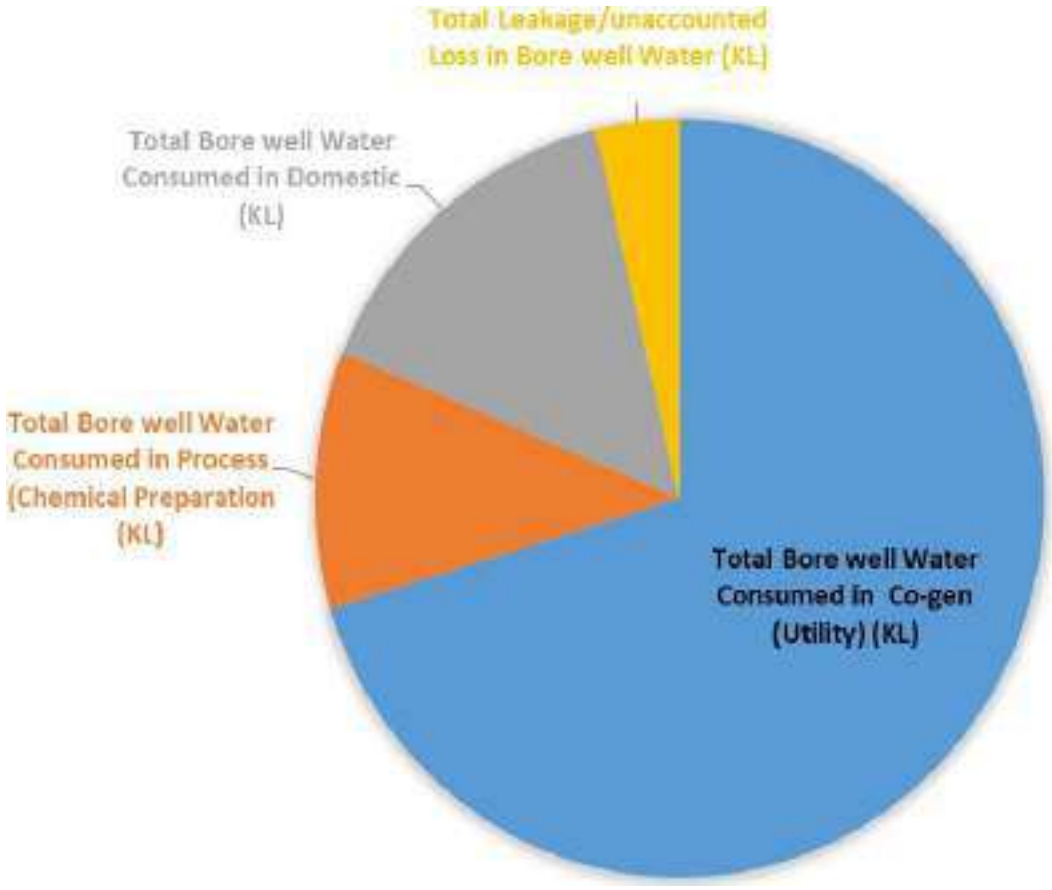


Figure 3; Area wise Water Consumption in the Sugar Plant

Total Raw Water Withdrawal for Last Three Years

Total Raw Water Withdrawal for last three (3) years is shown in below table

Table 8 Total Raw Water Withdrawal for Jan-2021 to Dec-2023

Year	Month	Total Water Withdrawal from Bore well-1 (KL)	Total Water Withdrawal from Bore well-2 (KL)	Total Water Withdrawal from Bore well-3 (KL)
2021	January	9857	0	890
	February	1056	0	945
	March	9467	0	1004
	April	9905	0	774
	May	5718	0	677
	June	2443	0	649
	July	2238	0	665
	August	2455	0	632
	September	2316	0	650
	October	2881	0	707
	November	0	13049	941
	December	0	12881	1124
Total		**48,336**	**25,930**	**9,658**
2022	January	0	13177	1138
	February	11661	0	1034
	March	12576	0	1185
	April	10477	2067	1303
	May	0	1393	915
	june	0	0	842
	July	0	0	893
	August	0	0	880
	September	0	0	805
	October	837	0	814
	November	11616	0	943
	December	12461	0	1032
Total		**59,628**	**16,637**	**11,784**
2023	January	12662	0	1097
	February	11428	0	1093
	March	88	12293	1321
	April	0	9946	1301
	May	0	829	1203
	June	0	115	1224
	July	0	0	1225
	August	0	0	987
	September	0	0	836
	October	0	0	885

	November	5286	5229	877
	December	6967	6736	891
Total		**36,431**	**35,148**	**12,940**

Table 9, Break-Up of Sources Withdrawal Pattern

Source	Total Raw water Withdrawal from Jan-2023 to Dec-2023, KL/year	Percentage (%)
Bore well no.1	36,431	43.10
Bore well no.2	35,148	41.59
Bore well no.3	12,940	15.31
Total	**84,519**	**100 %**

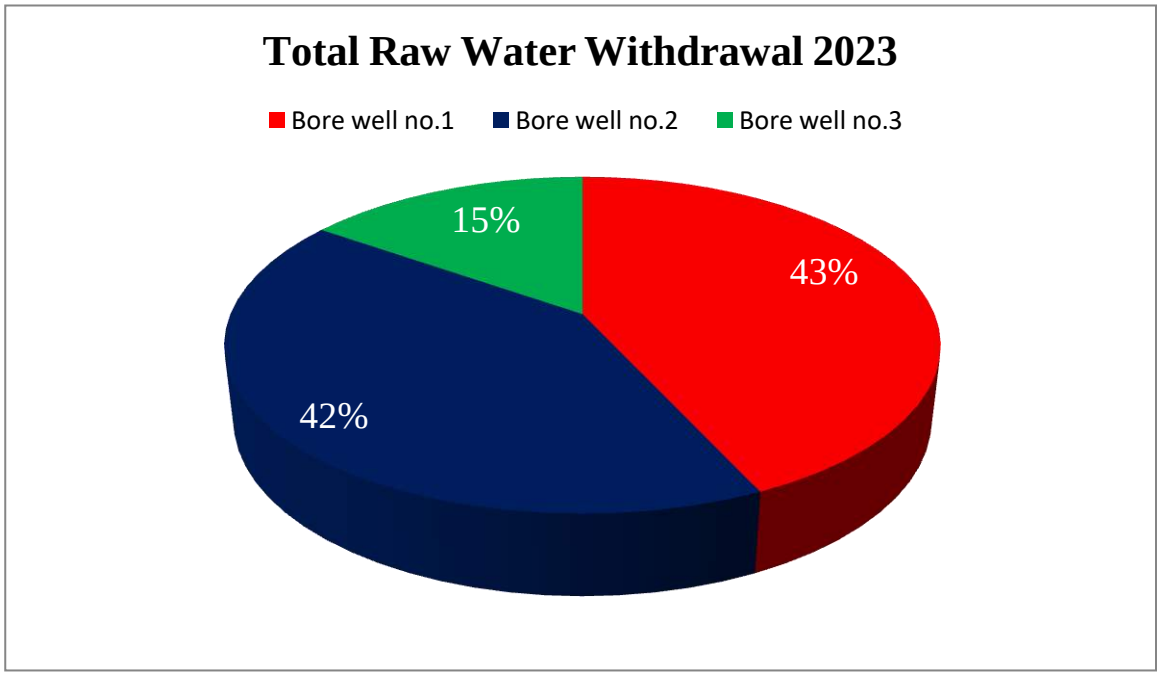


Figure 4, Bore well Water Withdrawal from Jan-2023 to Dec-2023

4.6.3 WATER COSTING:

The Audit team calculated the Per KL cost of Raw Water. The Rs. /KL cost of Raw water is **3.0** from Jan-2023 to December-2023. The expense towards energy consumption at bore well is considered for calculating raw water cost. The detail of Raw Water Rs. /KL cost is provided in below table.

Table 10 : Rs. / KL cost of Raw Water withdrawal

Sr.No	Particulars	Value
1	Total Energy Cost of Borewell-1,2 and 3 Rs.	194687
2	Total Maintenance Cost of Borewell-1,2 and 3 Rs.	58,823
3	Total Cost for bore well water including Energy Charges, Man Power Cost and Maintenance Cost, Rs.	253510
4	Total Water Extraction from Borewell-1 (Jan-2023 to Dec-2023) in KL	84,519
5	Cost of Water	3.0

CALIBRATION CERTIFICATES:

Dhampur Bio Organics Limited (Unit: Asmoli, Division: Sugar), Village Asmoli District Amroha (U.P.) has done calibration of the Bore Well and ETP Inlet and Outlet flow meters installed in the plant. Calibration certificates are attached as **Annexure-A**. **(Please attach all the calibration certificates)**

COOLING TOWER PERFORMANCE

During study, measurements of Cooling Tower, temperature/relative humidity of supply air, inlet/outlet temperature of water and power consumption of fans has been carried out. Cooling Tower performance calculations are summarized as below.

Table 11 Performance Evaluation of Cooling Towers

Performance Evaluation of Cooling Tower			
S No	Rated Details	Unit	Process Cooling Tower
1	Application		Hot water
2	Make		Mihir engg.
3	Type		FRP type
4	Number of Fan		1
5	capacity		100 m^3
Measured Parameters			
6	Hot Cooling Water Inlet to Tower from the Plant	°C	70
7	Cold Cooling Water Outlet from Tower to the Plant	°C	30
8	Air Inlet (DBT)	°C	29
9	(WBT)	°C	18.5
10	Operating Range	°C	40
11	Approach	°C	16.7
12	Effectiveness Of Cooling Tower	%	62
13	Remarks	-	-

• From the above table it can be seen, that the Process cooling Tower is giving satisfactory results. The CT effectiveness is dependent on the ambient conditions, but despite that, the effectiveness should normally in the range of 60 % & above. The evaluated CT effectiveness was in the range from 55 % to 65 %.

POWER PLANT COOLING TOWER PUMP PERFORMANCE EVALUATION

During audit, we measured Terminal Voltage, Load Current, Power Consumption and P.F. for power plant cooling tower pump. We have also checked throttling, Flow, measured Suction and Discharge Pressure. All the measured data is tabulated below:

Table 12 Pump Performance Evaluation of Power Plant Cooling Tower Pump

Pump Identification	**Unit**	**Power Plant Cooling Tower Pumps**
Rated Parameters		**Pump-1**
Running Status		Running
Pump Make		Flow Serve
Model		
Speed	RPM	1450
Rated Flow	m3/hr	150
Rated Head	M	41
Rated Power	KW	45
Measured Parameters		
Measured Flow	m3/hr	148
Velocity	m/s	1.06
Discharge Pressure (A)	Kg/cm2	4.9
Suction Pressure (B)	Kg/cm2	0.23
Performance Evaluation		
Total Head (=(A-B)X10)	M	46.7
Head Utilization	%	98
Flow Utilization	%	94.2
Input power	kW	67.8
Hydraulic Power	KW	45.2
Motor Efficiency	%	94
Pump Efficiency	%	69.3
Overall (Pump Set) Efficiency	%	62.2
Suction Side Throttling	%	100% open
Discharge Side Throttling	%	100% open
Running Hour	%	24

OBSERVATIONS:

The evaluated overall pump efficiency of Power plant cooling tower pump is **62.2%**, this shows that the efficiency of the pump is satisfactory.

RECOMMENDATIONS:

- The Process cooling Tower is giving satisfactory results. The CT effectiveness is dependent on the ambient conditions, but despite that, the effectiveness should normally in the range of 60% & above. The evaluated CT effectiveness was in the range from 55 % to 65 %.
- The audit team took the flow and pressure readings from their own instruments and found that the pressure gauge reading of Bore Well # 2 was having error. Here we recommend replacing the pressure gauge at the discharge line of Bore Well # 2.
- During measurements, it was observed that BW # 2 is consuming 51kW against the

rated power of 45kW. Here we recommend checking the pump to avoid any overheating or pump malfunctioning.

CHAPTER 5
WATER TREATMENT PRACTICES

5. WATER & WASTE WATER TREATMENT PRACTICES (OR) WATER TREATMENT & RECYCLING PRACTICES (OR) JUST 'WATER TREATMENT PRACTICES

The Water Treatment Practices in M/s Dhampur Bio Organics Limited (Unit: Asmoli, Division: Sugar) Village- Asmoli, Tehsil & District– Sambhal, Uttar Pradesh – 244304 includes Two (02) RO having design capacity of 30 KL and 50 KL respectively. To treat the sugar effluent, plant has installed one CPU having design capacity of 36 m^3/hr . CPU was commissioned in year 2022. To treated the sugar factory effluent, plant has installed one **(01)** Effluent Treatment plant of capacity: **3000 KLD.**

RAW / FRESH WATER TREATMENT

For fresh water treatment, M/s Dhampur Bio Organics Limited (Unit: Asmoli, Division: Sugar) has installed two MGF and RO Plants. Plant installed two MGF of capacity 30 m^3/hr and 50m^3/hr and two (02) no RO of capacity 30 m^3/hr and 50m^3/hr respectively. The treated water of RO is collected in DM storage tank of capacity 80 KL and the reject water of this RO is used in ash handling plant. Water treated at DM plant is being used in Boiler makeup.

The basic process diagram and RO installed at Plant area are shown in figures below :

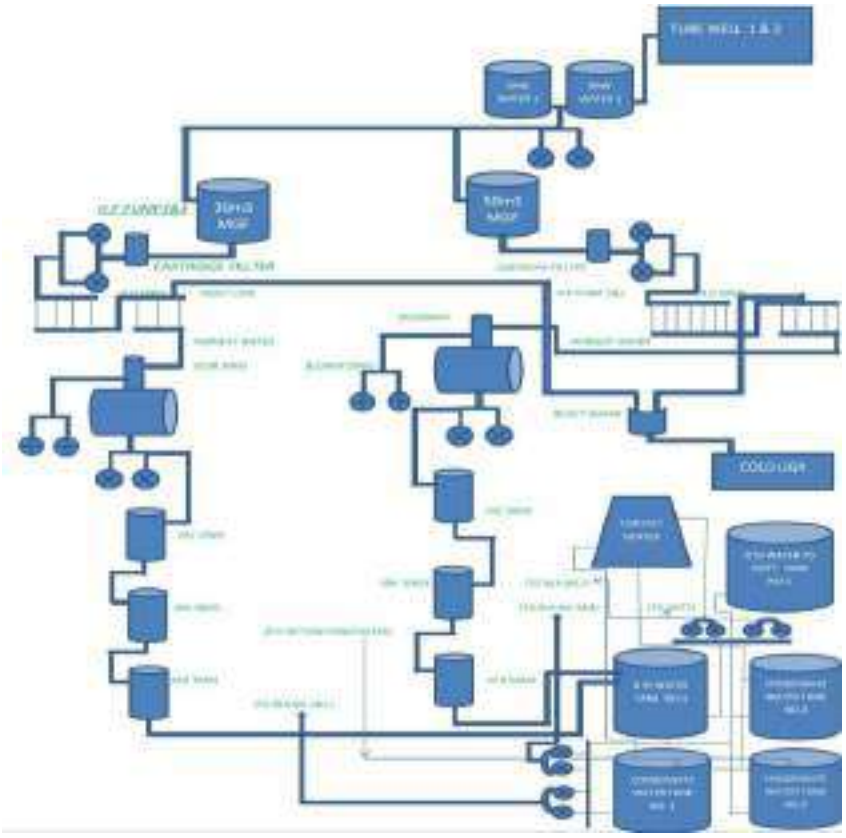


Figure 5; RO Plant Flow Chart

3063
647

RO PLANT

5.1.1 RO Treated Water Cost

The Audit team calculated the Rs. /KL cost of RO Water. The Rs. /KL cost of RO water for the year 2023 is **Rs 36.366/KL**. The expenses towards energy consumption at RO and PSF, chemical costs and manpower cost are considered for calculating the total cost for treatment. The details are provided in below table:

Table 13 Rs. /KL Cost of RO Water

Particulars	Value (per Day)
Total Man Power Cost of RO-1&2 and MGF, Rs.	6833.0
Total Chemical and Maintenance Cost of RO-1 & 2 and MGF, Rs.	22,770.0
Total Energy Charge of RO-1&2 and MGF, Rs.	9,240.0
Total Monthly Cost for treatment including Energy Charges, Maintenance, Man Power and Chemical Cost, Rs.	38343.0
Total Water Treated from RO-1 and 2, KL	1069
Cost of RO Water	Rs 36.33 / KL

NOTE: Audit team calculated the combined cost of RO and MGF

WASTE WATER TREATMENT & DISPOSAL

ETP (3000 KLD)

The crushing capacity of M/s Dhampur Bio Organics Limited (Unit: Asmoli, Division: Sugar) is 9000 TCD and the ETP capacity is 3000 KLD. A brief description of the plant & process developed by M/s Dhampur Bio Organics Limited (Unit: Asmoli, Division: Sugar) for the treatment of sugar factory effluents is given below. The process is highly scientific, efficient & simple to operate & there is no danger of seepage. The working of the Plant is

easy & needs only a little supervision. The waste water collected from various sections in the process is collected in a combined effluent drain leading to the E.T.P. The treatment process is divided into three steps.

Primary Treatment: It is mainly physical and chemical treatment. A coarse screen is fixed in the drain just before the E.T.P. for the removal of coarse material / particles such as paper, cloth etc. The effluent passes through a fixed type mechanical oil skimmer for removing of oil and grease from the surface of effluents. The oil & grease collected is scrapped from the surface & is stored in a PVC drum. The same is mixed with bagasse and burnt in boiler.

The effluent now enters into a reaction / flash mixing tank; here the effluent is mixed thoroughly with the requisite doses of lime and polyelectrolyte's by with stirring. The pH of the resulting effluent should be 7.5 to 8.0 at this stage. The effluent now enters into Equalization tank to homogenize the wastewater. The Equalization tank provides the necessary residence time for mixing of varying Effluents so as to attain the average value for the various parameters.

Figure 6, Equalization tank of DBOL (Unit: Asmoli, Division: Sugar)

The mixed effluent is then fed into a primary clarifier at a definite rate with the help of a

centrifugal pump. The mixed effluent is then fed into a claro-flocculation unit fitted with a central flocculation chamber cum feed channel and the annular settling chamber. This is fitted with the low speed paddle mixer for flock formation. He flocculated solid mass settles on the bottom floor, from where it is continuously swept into bottom sludge well by mechanical scrapper for eventual removal into sludge drying bed under hydrostatic head.

The addition of lime and polyelectrolyte helps in coagulating most of the colloidal solid as well as all suspended solids and their eventual removal. The settled sludge at the bottom of the clarifier is collected in sludge well by means of rotating mechanical system. From here the sludge is removed by a sludge pump and sent to sludge drying bed.

Figure 7 Primary Clarifier of DBOL (Unit: Asmoli, Division: Sugar)

Secondary Treatment:

The activated sludge process is the most common option in secondary treatment. Aeration in an activated sludge process is based on pumping air into a tank, which promotes the microbial growth in the wastewater. The microbes feed on the organic material, forming flocks which can easily settle out. After settling in a separate settling tank, bacteria forming the "**activated sludge**" flocks are continually recalculated back to the aeration basin to increase the rate of decomposition.

Aeration provides oxygen to bacteria for treating and stabilizing the wastewater. Oxygen is needed by the bacteria to allow biodegradation to occur. The supplied oxygen is utilized by bacteria in the wastewater to break down the organic matter containing carbon to form carbon dioxide and water. Without the presence of sufficient oxygen, bacteria are not able to biodegrade the incoming organic matter in a reasonable time. In the absence of dissolved oxygen, degradation must occur under septic conditions, which are slow, odorous, and yield incomplete conversions of pollutants. Under septic conditions, some of the biological process converts hydrogen and sulphur to form hydrogen sulphide and transform carbon into methane. Other carbon will be converted to organic acids that create low pH conditions in the basin and make the water more difficult to treat and promote odour formation and blackish colour of water. Biodegradation of organic matter in the absence of oxygen is a very slow biological process.

It is the biological treatment of the effluent. The residual B.O.D. of the primary treated effluent in removed by means of activated sludge process. This process allows for intensive oxidation of all organics by means of a high sludge concentration. The relatively higher sludge mass in the system also allow for considerable colour removal of the colour by adsorption as well as metabolism by the microorganism. The sustenance of high biological activity of the sludge requires sufficient nutrients within the effluent i.e. N & P in particular which help in the growth of new cells. The effluent as such contains very little N. The requirement of N & P is related to the B.O.D. content. A typical value of B.O.D.: N & P as 100:5:1 is required to be maintained.

This requires addition of nutrients in the form of Urea & DAP (Di-ammonium phosphate). These nutrients are added continuously by gravity feeding from two mixing tanks for each nutrient separately.

Figure 8, Aeration tank of DBOL (Unit: Asmoli, Division: Sugar)

Secondary Clarifier:

The combination of primary treatment and secondary activated sludge process with sludge concentration (MLSS) removes most of the colour components resulting in a relatively clear effluent. The activated sludge process is based on the recycle sludge mass from the secondary settler. Sludge is recycling into the aeration chamber to maintain high sludge concentration. The excess sludge produced during the bio-oxidation process is discharged in sludge drying bed for dewatering. A high sludge concentration (MLSS) of 2500-3000mg/ltr is maintained within the system. The aeration chamber is designed as a completely mixed

system. The mixing and oxygen supply for the oxidation load is provided by means of the mechanical aerators of fixed type.

Figure 09, Secondary Clarifier of DBOL(Unit: Asmoli, Division: Sugar)

Tertiary treatment: The mixed effluent from the aeration chamber flows into a secondary clarifier for separation of the sludge. The supernatant liquid passed through activated carbon filter for polishing of the treated effluent. The effluent from collection tank is pumped into coarse sand filter & activated carbon filter respectively. Both units are in series and they not only reduce suspended solids to a great extent but also help in removing of B.O.D. to some extent.

Figure 10, Tertiary treatment of DBOL (Unit: Asmoli, Division: Sugar)

Standards of treated water:

The MoEF & CC has issued a detailed notification for the sugar industry treated effluent parameters standards norms on dated 14th January 2016. The details of treated water effluent norms are as given in table.

Table 14 Table Standard Tolerance Limit

S. No.	Parameters	Standards Limits
1.	pH	5.5 to 8.5
2.	Suspended Solids	100 mg/lit for land application, 30 mg/ltr for water body.
3.	B.O.D.	100 mg/lit for land application, 30 mg/ltr for Water body.
4.	Total dissolved Solids	2100 mg/ltr.
5.	Oil & Greece	10 mg/ltr.
6.	C.O.D.	250 mg/ltr.

Online Continuous monitoring system: M/s Dhampur Bio Organics Limited (Unit: Asmoli, Division: Sugar) also installed Online Continuous monitoring system for sending the real time data to the server of CPCB and UPPCB.

Figure 11, Online monitoring System

Disposal of treated effluent: The sugar unit ETP treated water is being gainfully utilized in the irrigation of factory own green belt and farmers land/field through close pipeline network in accordance with the irrigation protocol submitted to UPPCB.

3000 KLD ETP (ETP LABORATORY)

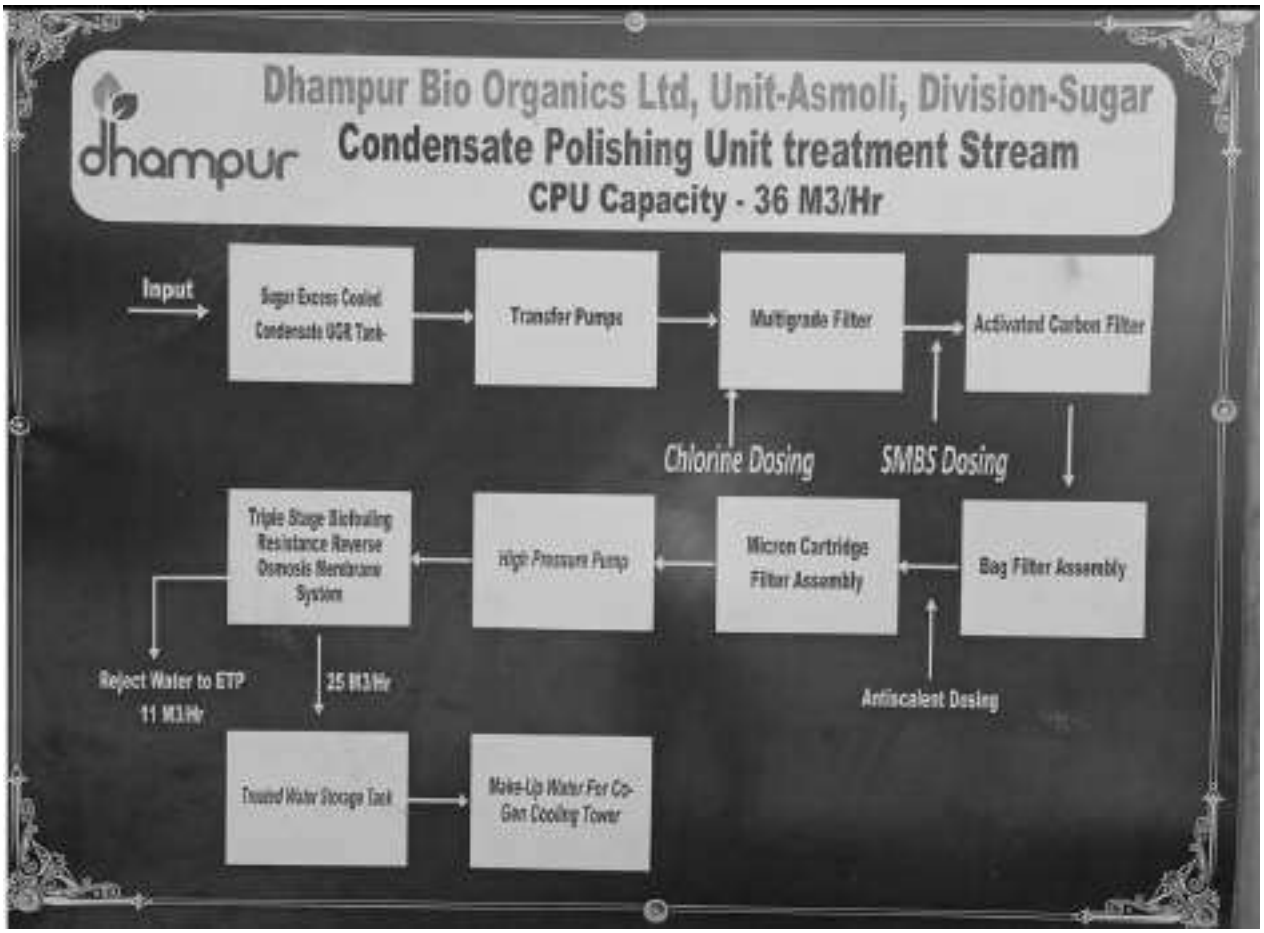


Figure 12(a) CPU Layout at Dhampur Bio Organics Limited (Unit: Asmoli, Division: Sugar)

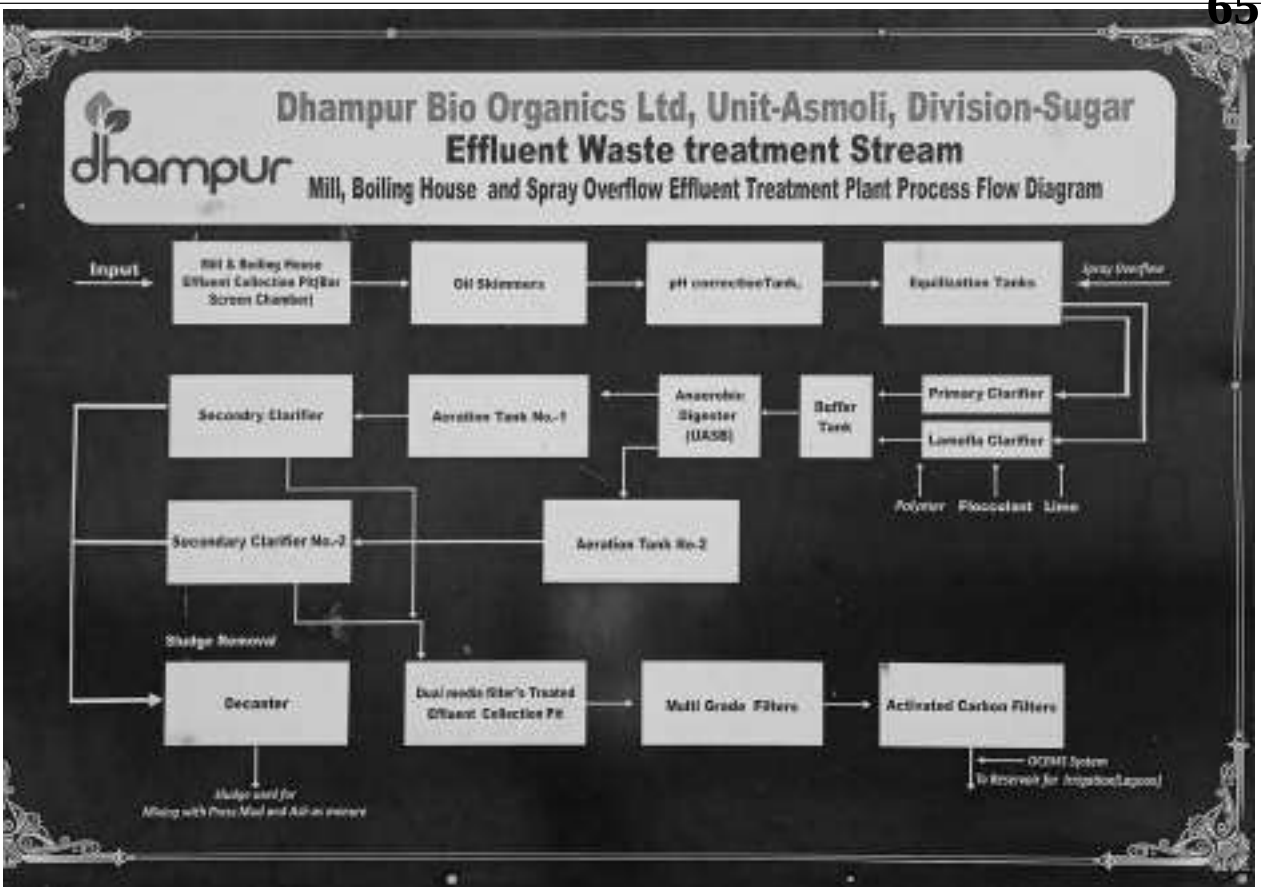


Figure 12(b), ETP Layout at Dhampur Bio Organics Limited (Unit: Asmoli, Division: Sugar)

The Audit team calculated the Rs. /KL cost of ETP Water. The Rs. /KL cost of ETP water for the year 2023 is **Rs 34.76 /KL**. The expenses towards energy consumption at ETP plant, chemical costs and manpower cost are considered for calculating the total cost for treatment. The details are provided in below table:

Table 15, Rs. /KL cost of ETP Treated Water

Sr. No.	Particulars	Value/Month
1	Total Manpower Cost of ETP, Rs.	3,52,500
2	Total Chemical Cost of ETP, Rs.	14,56,000
3	Total Maintenance Cost of ETP, Rs.	50,000
4	Total Energy Charge of ETP, Rs.	5,50,000
5	Total Cost for treatment including Energy Charges, Chemical, Maintenance Cost and Man Power Cost, Rs.	24,08,500
6	Total Water Treated, KL	69,287.0
7	Cost of ETP Rs./KL	34.76
8	Cost of ETP Rs./L	0.03

The Audit team has collected and reviewed the quantity of treated wastewater at ETP for year 2021, 2022 and 2023. The detail of treated waste water supply is provided in below tables:

Table 16, ETP Inlet/Outlet Water Jan- 2021 to Dec-2021

Months	KLD Plant ETP Inlet Water (KL)	KLD Plant ETP outlet
Jan	49038	49006
Feb	44793	44717
Mar	48650	48469
Apr	42732	42559
May	9679	9510
Jun	171	169
Jul	0	0
Aug	0	0
Sep	0	0
Oct	0	0
Nov	37204	34364
Dec	52611	52369
Total	**2,84,878**	**2,81,163**

Table 17, ETP Inlet/Outlet Water Jan- 2022 to Dec-2022

Months	KLD Plant ETP Inlet Water (KL)	KLD Plant ETP outlet
Jan	51444	51306
Feb	47412	47204
Mar	52547	52224
Apr	25745	25573
May	1346	1297
Jun	5045	4827
Jul	1405	1288
Aug	185	135
Sep	0	0
Oct	0	0
Nov	43524	39367
Dec	53553	53191
Total	**2,82,206**	**2,76,412**

Table 18, ETP Inlet/Outlet Water Jan- 2023 to Dec-2023

Months	KLD Plant ETP Inlet Water (KL)	KLD Plant ETP outlet
Jan	54247	53810
Feb	49111	48679
Mar	53261	52765
Apr	42973	42592
May	9580	9507
Jun	320	308
Jul	0	0
Aug	0	0
Sep	0	0
Oct	0	0
Nov	39602	35551
Dec	69523	69287
Total	**3,18,617**	**3,12,499**

As evident from above tables, the average waste water received at the ETP in the year 2021, 2022, 2023 was **1424.3 KL/Day, 1411.0 KL/Day and 1593.0 KL/Day**

respectively and the average treated water from ETP in the year 2021, 2022, 2023 was **1405.8 KL/Day, 1382.06 KL/Day and 1562.5 KL/Day** respectively.

The average treated water in ETP (Jan-2023 to Dec-2023) is **1562.5 KLD**. ETP plant has an installed capacity is **3000 KLD,** whereas the treated average wastewater is **52.08 %** of the rated capacity. Therefore, the effective capacity utilization of ETP is **52.08 %.**

ENVIRONMENTAL COMPLIANCE (RELATED TO WATER)

1. The maximum ground water requirement for the M/s Dhampur Bio Organics Limited (Unit: Asmoli, Division: Sugar) is 890 KLD however plant has obtained the NOC of water quantity 920 KLD from three tube wells and NOC for the same has been granted, and this total requirement of fresh water is fulfill by Ground water through 3 numbers of bore-wells within the plant site. The ground water withdrawal will be 890 KLD only, and should meet out by only one tube well. The second tube well will be used as standby.

- **Tube Well # 1**: Plant has a NOC to withdraw **60,000 KL/year** from tube well # 1 with the Maximum Allowable Rate of Withdrawal of **100 m3/hr** and Running hour not exceeding 4hrs.
- **Tube Well # 2**: Plant has a NOC to withdraw **60,000 KL/year** from tube well # 2 with the Maximum Allowable Rate of Withdrawal of **100 m3/hr** and Running hour not exceeding 4hrs.
- **Tube Well # 3**: Plant has a NOC to withdraw **18000 KL/year** from tube well # 3 with the Maximum Allowable Rate of Withdrawal of **40 m3/hr** and Running hour not exceeding 3hrs.

The NOC has been issued by UPGWD (Uttar Pradesh Ground Water department) vide letter no **1. NOC013653. 2. NOC039759. 3. NOC034938**.No new/additional ground water abstraction structures to be constructed for this purpose without prior approval from UPGWD. As per data provided by the plant, the total ground water abstraction in the year 2023 is 84519 KL/year (BW#1 = 36,431 KL and BW#2 = 35,148 KL and BW#3 = 12,940 KL) i:e 423 KL/day (considering @ 200 days) which is less than the NOC of 920 KLD issued to plant. This shows that Dhampur Bio Organics Limited (Unit: Asmoli, Division: Sugar) comply with the NOC for ground water withdrawal of 920 KLD KL/year. NOC copy for Tube Well # 1, 2 & 3 are attached as **Annexure-B.**

2. No change of location, design, rate of withdrawal and pumping device in respect of the Proposed well as indicated at SL (2) and (3) of this certificate shall be made without prior permission of the Competent Authority. Any deviation in this regard shall lead to cancellation of this authorization. Audit team has checked the running parameters of

both the bore wells. All three bore wells are operated as per the NOC.

3. For the purpose of measuring and recording the quantity of ground water extracted,every said user shall affix digital water flow meters (conforming to BIS/ IS standards) having telemetry system in the abstraction structure, which record rate and quantum of extraction, at outlet of pumping devices and it shall be presumed that the quantity recorded by the meter has been extracted by the said user, until the contrary is proved. The rate of extraction of ground water from the well shall not exceed to the recorded rate from water meters. M/s Dhampur Bio Organics Limited (Unit: Asmoli, Division: Sugar) has installed digital flow meter with telemetry system on the existing one (3) borewell and maintaining the data on daily basis.
4. Construction of piezometers and installation of digital water level recorders with telemetry shall be mandatory for user. Depth and zone tapped of piezometer should be commensurate with that of the pumping well. The data, obtained from digital water level recorders shall be made available to UPGWD (Central Ground Water Authority) on monthly basis. Piezometer is a borewell /tube well used only for measuring the water level by lowering the tape/ sounder or automatic water level measuring equipment. It is also used to take water sample for water quality testing whenever needed. General guidelines for installation of piezometers are as follows for compliance of NOC:
   a) The piezometer is to be installed/constructed at the minimum of 50 m distance from the pumping well through which ground water is being withdrawn. The diameter of the piezometer should be about 4‖ to 6‖.
   b) The depth of the piezometer should be same as is case of the pumping well from which ground water is being abstracted. If, more than one piezometer are installed the second piezometer should monitor the shallow ground water regime. It will facilitate shallow as well as deeper ground water aquifer monitoring.
   c) The measuring frequency should be monthly and accuracy of measurement should be up to cm. the reported measurement should be given in meter up to two decimals.
   d) For measurement of water level sounder or automatic water level recorder (AWLR)/ Digital Automatic water level recorder (DWLR) with telemetry system should be used for accuracy.
   e) The measurement of water level in piezometer should be taken, only after the pumping from the surrounding tube wells has been stopped for about four to six hours.
   f) All the details regarding coordinates, reduced level (with respect to mean level), depth, zone taped and assembly lowered should be provided for bringing the piezometer into the Hydrograph Monitoring System for Ground Water Department,

Uttar Pradesh, and for its validation.

g) No. of piezometers to be constructed & Type of water level monitoring mechanism shall be as per below table:

S. No	Quantum of Ground water withdrawal (cum/day)	No. of Piezometers Required	Monitoring Mechanism	
			Manual	Manual DWLR with Telemetry
1	< 10	0	0	0
2	11-50	1	1	0
3	50- 500	1	0	1
4	> 500	2	0	2

M/s Dhampur Bio Organics Limited (Unit: Asmoli, Division: Sugar) has obtained the NOC for 920 KLD from three tube wells. Since the plant has NOC to withdraw 920 KLD from two tube wells, Dhampur Bio Organics Limited (Unit: Asmoli, Division: Sugar) must install two piezometer with telemetry system. Plant has installed two (02) Piezometer with telematory system to execute the ground water regime. Here, industry is complying with condition of piezometer. Photographs of both the piezometer is given below:

Piezometer Image-1

Piezometer Image-2

Figure-13; Piezometer Image-1, 2

5. The ground water quality has to be monitored twice in a year during pre-monsoon (May/June) and post-monsoon (October/November) periods. Quality may be got analyzed from NABL approved lab. Besides, one sample (1 lt. capacity bottle) to the concerned Director, Ground Water Department, Uttar Pradesh, for chemical analysis. The audit team has checked and verified all the water quality test reports. All of the reports comply with the environmental factors related to water uses and discharge. (Attached separately in **Annexure-C**).

6. A Permanent display board should be installed at piezometer/Tube wells site for providing the location, piezometer/ tube well number, depth and zone tapped of piezometer/tube well for standard referencing and identification. M/s Dhampur Bio Organics Limited (Unit: Asmoli, Division: Sugar) has provided display boards on all the locations as per the NOC.

CHAPTER 6
RAIN WATER HARVESTING

6. RAIN WATER HARVESTING

The concept of rainwater harvesting is an ancient one and has become popular in recent times because of the vagaries of the monsoon, depleting water resources, its user friendliness. It has become an important and eco-friendly tool to protect ground water, useful and cost-effective method to boost water resources in any area. Rainwater harvesting is the technique of collection and storage of rainwater at surface or in sub-surface aquifers, before it is lost as surface run-off.

RAIN WATER HARVESTING DBOL (UNIT: ASMOLI, DIVISION: SUGAR)

M/s Dhampur Bio Organics Limited (Unit: Asmoli, Division: Sugar) has implemented various measures to reduce water consumption in industrial premises and surroundingareas. In continuation of this Industry has made 02 nos. of rainwater harvesting pits for ground water recharge and developed 02 nos. ponds in and around the industrial premisesfor the storage and recharge of the rainwater.

- Three most important components, which need to be evaluated for designing a rainwater harvesting structure, are
- Hydrogeology of the area including nature and extent of aquifer, soil cover, topography, depth to water table and quality of ground water.
- Area contributing to runoff i.e., total area and land use pattern, whether industrial, residential or green belts and general built-up pattern of the area.
- Hydro meteorological characters viz. rainfall duration, general pattern of intensity of rainfall.

Based on the Runoff Coefficient the water harvesting potential of a site could be estimated using the formula given below

Water harvesting potential in m^3/year = Annual Rainfall (m) x Area of catchment (m^2) x Runoff coefficient

RECHARGE BY PERCOLATION PONDS

Total 02 Numbers of ponds have been managed and adopted by the industry. Cleaning of the ponds has been done on periodic basis. The detail of all the 02 Ponds is listed below -

Table 19, Ground water recharge by percolation pond

Sr. No.	Ponds	Village Name	Khasra No.	Area (Hect.)	Depth	Volume (m^3)	Volume (m^3)/60%	No of filling	Recharge (m^3/annum)
1	Pond No.-1	Pariyawali	207, 215, 243, 244, 245, 246, 247, 347, 447, 672, 718, 720, 836	1.799	3.0	53970	32382	3	97146
2	Pond No.-2	Saindhari	132, 262, 302, 327, 332, 349,435, 495, 504, 510, 545, 578, 779, 852, 1066, 1247, 1252, 1261, 1326, 434,/ 14011, 940, /1402, 438, 400, 900, 440, 1250, 440k, 412kh	5.728	2.5	1432000	85920	3	257760
Total									354906

Pond Image

Pond Image

Figure-14; Pond Image

As per above calculation total 354906.0m^3 of water is being recharged through the ponds have been adopted by industry for below mentioned purposes:

1. Pond has been maintained and uses for the storing of the rain water and recharge of the ground water.
2. Collected water in the ponds is being utilized by villagers for their allied activities as and when required,
3. Some time it will be utilized for watering the greenbelt area.
4. The company has also taken up area specific plantation program to enhance the recharge measures.
5. Result of the recharge is that the ground water level is in rising trend in our and around the project location.

RECHARGE BY RAIN WATER HARVESTING PITS

TABLE 20, RECHARGE BY RWH PITS

S. No.	Details	Values
Area Details:		
1	Roof top Area (m^2)	25454
Rainfall data:		
1	Average Annual rainfall (m)	0.8
Runoff coefficients:		
1	Runoff coefficient for roof top	0.9

Table 21, Water Quantity of Runoff Water

Sr. No	Details	Area (m^2)	Annual Rainfall (m)	Run-off coeff.	Total Runoff (m3 per Annum)
1	Roof top Area	25454	0.9	0.81	18555.9
Total Runoff water Quantity /annum (m^3/year)		25454			**18555.9**

Total Collected rainwater in the industrial premises is 18555.9m^3/annum. Total 02 Numbers of rainwater harvesting pits are constructed in the factory premises. The rainwater recharge details are as: - Total covered roof top area for rain water harvesting is 25454 m^2.

Water Recharge by Roof Top: Roof top area 25454 Sqm in Dhampur Bio Organics Limited (Unit: Asmoli, Division: Sugar). Water recharge through roof top 18555.9 KL/year

Total water recharge (Recharge by Percolation Ponds+ Recharge by Rainwater harvesting pits) = 373461.9 KL/Year.

CONCLUSION

Present status and extraction of ground water in the project premises would not affect the potential and depletion of water level in surrounding areas due to Industries and Rainwater harvesting measures has been taken for groundwater recharge.

CHAPTER 7

DATA ANALYSIS AND RESULT

DATA ANALYSIS & RESULTS

SEASON WISE WITHDRAWAL AND CONSUMPTION DETAILS

Season wise water extraction, consumption and discharge for Dhampur Bio Organics Limited (Unit: Asmoli, Division: Sugar) has been analyzed. The below table shows the analyzed data.

Table 22, Season Wise Extraction and Consumption Details

Description (Jan-2023 to Dec-2023)	Summers (KLD) (March-June)	Monsoons (KLD) (July– October)	Winters (KLD) (November-February)
Total Water Withdrawal from Borewell-1	88	0	48167
Total Water Withdrawal from Borewell-2	23183	0	0
Total Water Withdrawal from Borewell-3	5049	3933	4165
Total Fresh Water Inlet	28232	3933	52332
Total Water Available for Utilization			
TOTAL CONSUPTION			
Total Bore well Water Consumed in co-gen(Utility) (KL)	19314	0	40084
Total Bore well Water Consumed in Process(Chemical Preparation (KL)	3025	0	6278
Total Bore well Water Consumed in Domestic (KL)	4948	3854	3668
Total Consumption	27288	3854	50031

Observations:

- From the above table, it is seen that the water extraction and consumption is highest in winter season.

7.2. TOTAL RAW WATER WITHDRAWAL, CONSUMPTION AND DISCHRGE DETAILS (LAST THREE YEARS)

Audit team analyzed the monthly data for Source, consumption and discharge from the year January-2021 to December-2023. Details provided in below table:

Table 23 Total Source, Consumption and Discharge Data

Month	Source (KL)	Consumption (KL)	Discharge Water (ETP Treated Water In The Irrigation Of Factory Own Green Belt And Farmer Land/Field. (KL)
Jan 2021 – Dec 2021			
Jan	10716	10305	49006
Feb	11001	10580	44717
Mar	10471	10072	48469

Apr	10679	10267	42559
May	6395	6153	9510
Jun	3092	2981	169
Jul	2903	2800	0
Aug	3087	2976	0
Sep	2966	2860	0
Oct	3588	3459	0
Nov	13990	13449	34364
Dec	14005	13467	52369
Total	**92893**	**89370**	**281163**
Jan 2022 – Dec 2022			
Jan	14315	13765	48960
Feb	12695	12208	47191
Mar	13761	13234	50672
Apr	13847	13319	28026
May	2308	2234	1040
Jun	842	825	6690
Jul	893	875	5210
Aug	880	862	0
Sep	805	789	0
Oct	1651	1601	0
Nov	12559	12076	31393
Dec	13493	12974	52704
Total	**88049**	**84763**	**271886**
Jan 2023 – Dec 2023			
Jan	13759	13231	54271
Feb	12521	12042	48923
Mar	13702	13180	50219
Apr	11247	10823	40275
May	2032	1975	18692
Jun	1339	1310	0
Jul	1225	1201	70
Aug	987	967	0
Sep	836	819	0
Oct	885	867	0
Nov	11392	10954	23819
Dec	14594	14028	73521
Total	**84519**	**81397**	**309790**

CHAPTER 8
WATER CONSERVATION OPPORTUNITIES

WATER CONSERVATION OPPURTUNITIES

Best management practices (BMPs) are a set of hands-on recommendations that help to identify opportunities and implement programs to save water in the plant. BMPs are developed for the various water-use categories in the office buildings and plant for monitoring and operational procedures. They are grouped according to indoor water use, outdoor water use, and monitoring and operational procedures. We can use toilet water-saving program by using part or all the BMPs depending on budget and environmental requirements. Tips and information are provided on water-saving amounts and cost recovery to help in prioritizing measures and make the most knock for buck.

Based on the information collected and observations, the following can be recommended to reduce water use and increase its efficiency.

WATER LEAKAGE IN PLANT

During the site survey leakages were found at some of the locations. All the leakages were quantified with the help of measuring beaker / measuring cylinder or any other form. Locations with the leakage quantity are mentioned in below table:

Table 24: Water Leakages in Plant

Sr. No	Particulars	Location	Leakage Value (liter/hr)	Running Hour	Quantity	Leakage Value (liter/day)
1	Drinking Water Leakage	Near mill house	10	24	1	240
2	Bore well -1 valve leakage	Bore well-1	120	7	1	840
3	Bore well -3 valve leakage	Borewell-2	150	7	1	1050
4	RO Membrane leakage	RO plant	28	7	1	196
5	RO Membrane leakage	RO plant	23	7	1	161
6	Canteen wash basin Leakage	Guest house	7	7	1	49
7	Guest house canteen utensil cleaning tap leakage	Guest house	8	7	1	56
8	ETP wash basin leakage	ETP LAB	15	24	1	360
9	Water Supply Pipe Leakage	Near Guest House Gate	11	24	1	264
Total Leakage (Liter/day)						3216
Total Leakage (KL/day)						**3.216**

3083
667

- During the field trials, 3.216 KLD water leakages were found at 09 different locations. Approximately 1173 KL/year of water can be saved by arresting all the leakages in the plant. It is recommended to stop all the leakages points by taking necessary action. Images showing leakages are shown in below figures:

Figure-15;Leakage location with photo

Sr.No	Leakage Location	Leakage Image
1	Drinking Water Leakage	
2	Bore well -1 valve leakage	
3	Bore well -3 valve leakage	

4	RO Membrane leakage	
5	RO Membrane leakage	
6	Near Canteen Hand wash Leakage	
7	Water Supply Pipe Leakage	

FAUCETS

GENERAL TOILETS NEAR B/W-1, MILL HOUSE, CANTEEN, DM PLANT, ETP

Present Scenario

The audit team has conducted the flow sample measurement on existing taps installed in toilets wash basin of General Toilets Near B/W-1, Mill House, Canteen, DM Plant, ETP Toilets to identify the water saving potential in faucets. It is observed that average flow of existing tap/faucets at toilet washbasin faucet is **7 Liters per Minute (LPM)**. Faucets flows can easily be reduced without affecting the comfort of the water user. Therefore, based on sample flow measurement, we recommend installing nozzle spray flow regulator faucets in General Toilets near B/W-1, Mill House, Canteen, DM Plant, ETP Toilets faucets. This will result in impressive savings of around 50-60 percent of faucets water use. Total **10 nos.** of wash basins faucets in General Toilets Near B/W-1, Mill House, Canteen, DM Plant, ETP Toilets were found where average flow is 7 Liters Per Minute (LPM).

Recommendation

We recommend installing nozzle spray flow regulator faucets in these 10 wash basin faucets to reduce the flow from **7 LPM to 3.5 LPM**. The daily water used in this 10-wash basin is **0.18 KL/Day.**

Water Savings Potential

It is assumed that by replacing old faucets with new nozzle spray flow regulator faucets, 0.09 KL/Day of water can be saved in hand wash. Total 34 KL/year of water will be saved by adding nozzle spray flow regulator faucets on existing 10 taps. The resultant benefit in terms of energy saving workout is Rs. 102/year with an estimated investment of Rs. 2000 with the simple payback period of 235 months. Water saving potential by adding nozzle spray flow regulator faucets are shown in below table

Table 25
Estimated Water Saving Potential by Replacing Wash basin in General Toilets Near B/W-1, Mill House, Canteen, DM Plant, ETP with nozzle spray flow regulator faucets

Sr. No.	Particulars	Unit	Value
1	Total No. of Wash basin in General Toilets Near B/W-1, Mill House, Canteen, DM Plant, ETP	-	10
2	Total No. of Employee used wash basin in General Toilets Near B/W-1, Mill House, Canteen, DM Plant, ETP	-	50
3	Present Average flow of One Faucet	LPM	7
4	Water used in wash basin for one Wash	Liter	0.9
5	Approximate No. of Times Hand Wash by Single Employee	-	4
6	Total Daily Water Consumption in Wash Basin	KL/day	0.18
7	Present Total Annual Water Consumption in Wash Basin (consider 365 days)	KL/year	68.0

3086
670

8	Total Annual Water Consumption by Reducing flow to 50%	KL/year	34.0
9	Annual Monetary Saving by Reducing Flow to 50%	KL/year	34.0
10	Average Cost of Bore well Water	Rs. /KL	3.0
11	Total Annual Saving in Bore Well Water	Rs.	102
12	Estimated Investment by adding Nozzle Spray Flow Regulator to reduce flow @ Rs. 200 for Single Nozzle Spray Flow Regulator, Total No. of Hand Wash = 1	Rs.	2000
13	Simple Payback period	Months	235

CANTEEN HAND WASH

The audit team has conducted the flow sample measurement on existing taps installed in main canteen washbasin to identify the water saving potential in faucets. It is observed that average flow of existing tap/faucets at toilet washbasin faucet is 1.7 Liters Per Press (Push). Faucets flows can easily be reduced without affecting the comfort of the water user. Therefore, based on sample flow measurement, we recommend installing nozzle spray flow regulator faucets in main canteen hand wash. This will result in impressive savings of around 50-60 percent of faucets water use. Total 04 nos. of wash basins faucets in main canteen were found where average flow is 1.7 Liters per Press (Push).

Recommendation

We recommend installing nozzle spray flow regulator faucets in these 04 wash basin faucets to reduce the flow from 1.7 Liter per Press (Push) to 0.83 Liter per Press (Push). The daily water used in these 04 washbasins is 0.289 KL/Day.

Water Savings Potential

It is assumed that by replacing old faucets with new nozzle spray flow regulator faucets, 0.144 KL/Day of water can be saved in hand wash. Total 52.5 KL/year of water will be saved by adding nozzle spray flow regulator faucets on existing 04 taps. The resultant benefit in terms of energy saving workout is Rs. 158/year with an estimated investment of Rs. 800 with the simple payback period of 60 months. Water saving potential by adding nozzle spray flow regulator faucets are shown in below table:

Table 26 Estimated Water Saving Potential by Replacing Canteen Hand Wash with nozzle spray flow regulator faucets

Sr. No.	Particulars	Unit	Value
1	Total No. of Wash basin in Canteen Hand Wash	-	4
2	Total No. of Employee used wash basin in Canteen Hand Wash	-	85
3	Water used in wash basin for one Wash	Liter	1.7
4	Approximate No. of Times Hand Wash by Single Employee	-	2
5	Total Daily Water Consumption in Wash Basin	KL/day	0.289
6	Present Total Annual Water Consumption in Wash Basin	KL/year	105. 5
7	Total Annual Water Consumption by Reducing	KL/year	52. 5

	flow to 50%		
8	Annual Monetary Saving by Reducing Flow to 50%	KL/year	52. 5
9	Average Cost of Bore well Water	Rs. /KL	3.0
10	Total Annual Saving in Bore Well Water	Rs.	158
11	Estimated Investment by adding Nozzle Spray Flow Regulator to reduce flow @ Rs. 200 for Single Nozzle Spray Flow Regulator, Total No. of Hand Wash = 4	Rs.	800
12	Simple Payback period	Months	60

DM PLANT HAND WASH

Present Scenario

The audit team has conducted the flow sample measurement on existing taps installed in toilets wash basin of DM Plant hand wash to identify the water saving potential in faucets. It is observed that average flow of existing tap/faucets at toilet washbasin faucet is **9.5 Liters Per Minute (LPM)**. Faucets flows can easily be reduced without affecting the comfort of the water user. Therefore, based on sample flow measurement, we recommend installing nozzle spray flow regulator faucets in DM Plant hand wash faucets. This will result in impressive savings of around 50-60 percent of faucets water use. Total **01 nos.** of wash basins faucets in DM Plant hand wash were found where average flow is 9.5 Liters Per Minute (LPM).

Recommendation

We recommend installing nozzle spray flow regulator faucets in these 01 wash basin faucets to reduce the flow from 9.5LPM to 4.75LPM. The daily water used in this 01 wash basin is 0.02KL/Day

Water Savings Potential

It is assumed that by replacing old faucets with new nozzle spray flow regulator faucets, **0.017 KL/Day** of water can be saved in hand wash. Total **6.4 KL/year** of water will be saved by adding nozzle spray flow regulator faucets on existing 01 taps. The resultant benefit in terms of energy saving workout is **Rs. 19/year** with an estimated investment of **Rs. 200** with the simple payback period of **125 months**. Water saving potential by adding nozzle spray flow regulator faucets are shown in below table:

Table 27
Estimated Water Saving Potential by Replacing Old Faucet in DM Plant Hand Wash with nozzle spray flow regulator faucets

Sr. No	Particulars	Unit	Value
1	Total No. of Wash basin in DM PLANT HAND WASH	-	1
2	Total No. of Employee used wash basin in DM Plant	-	8

	Hand Wash		
3	Present Average flow of One Faucet	LPM	9.5
4	Water used in wash basin for one Wash	Liter	1.10
5	Approximate No. of Times Hand Wash by Single Employee	-	4
6	Total Daily Water Consumption in Wash Basin	KL/day	0.035
7	Present Total Annual Water Consumption in Wash Basin	KL/year	12.84
8	Total Annual Water Consumption by Reducing flow to 50%	KL/year	6.4
9	Annual Monetary Saving by Reducing Flow to 50%	KL/year	6.4
10	Average Cost of Bore well Water	Rs. /KL	3.0
11	Total Annual Saving in Bore Well Water	Rs.	19
12	Estimated Investment by adding Nozzle Spray Flow Regulator to reduce flow @ Rs. 200 for Single Nozzle Spray Flow Regulator, Total No. of Hand Wash = 1	Rs.	200
13	Simple Payback period	Months	125

MILL HOUSE HANDWASH

Present Scenario

The audit team has conducted the flow sample measurement on existing taps installed in canteen wash basin of Mill house hand wash to identify the water saving potential in faucets. It is observed that average flow of existing tap/faucets at canteen washbasin faucet is **12 Liters Per Minute (LPM)**. Faucets flows can easily be reduced without affecting the comfort of the water user. Therefore, based on sample flow measurement, we recommend installing nozzle spray flow regulator faucets in Mill house hand wash faucets. This will result in impressive savings of around 50-60 percent of faucets water use. Total **02 nos.** of wash basins faucets in Mill house hand wash were found where average flow is 12 Liters Per Minute (LPM).

Recommendation

We recommend installing nozzle spray flow regulator faucets in these 01 wash basin faucets to reduce the flow from **12LPM to 6.LPM**. The daily water used in this 01 wash basin is **0.04KL/Day.**

Water Savings Potential

It is assumed that by replacing old faucets with new nozzle spray flow regulator faucets, **0.019 KL/Day** of water can be saved in hand wash. Total **7.154 KL/year** of water will be saved by adding nozzle spray flow regulator faucets on existing 02 taps. The resultant benefit in terms of energy saving workout is **Rs. 22/year** with an estimated investment of **Rs. 400** with the simple payback period of **223 months**. Water saving potential by adding nozzle spray flow regulator faucets are shown in below table:

Table 28
Estimated Water Saving Potential by Replacing Old Faucet in Mill house hand wash with nozzle spray flow regulator faucets

Sr. No.	Particulars	Unit	Value
1	Total No. of Wash basin in MILL HOUSE	-	2
2	Total No. of Employee used wash basin in MILL HOUSE	-	7
3	Present Average flow of One Faucet	LPM	12
4	Water used in wash basin for one Wash	Liter	1.4
5	Approximate No. of Times Hand Wash by Single Employee	-	4
6	Total Daily Water Consumption in Wash Basin	KL/day	0.0392
7	Present Total Annual Water Consumption in Wash Basin	KL/year	14.308
8	Total Annual Water Consumption by Reducing flow to 50%	KL/year	7.154
9	Annual Monetary Saving by Reducing Flow to 50%	KL/year	7.154
10	Average Cost of Bore well Water	Rs. /KL	3.0
11	Total Annual Saving in Bore Well Water	Rs.	22
12	Estimated Investment by adding Nozzle Spray Flow Regulator to reduce flow @ Rs. 200 for Single Nozzle Spray Flow Regulator, Total No. of Hand Wash = 2	Rs.	400
13	Simple Payback period	Months	223

ETP HAND WASH

Present Scenario

The audit team has conducted the flow sample measurement on existing taps installed in canteen wash basin of Mill house hand wash to identify the water saving potential in faucets. It is observed that average flow of existing tap/faucets at canteen washbasin faucet is **10 Liters per Minute (LPM)**. Faucets flows can easily be reduced without affecting the comfort of the water user. Therefore, based on sample flow measurement, we recommend installing nozzle spray flow regulator faucets in Mill house hand wash faucets. This will result in impressive savings of around 50-60 percent of faucets water use. Total **01 nos.** of wash basins faucets in ETP hand wash were found where average flow is 10 Liters Per Minute (LPM).

Recommendation

We recommend installing nozzle spray flow regulator faucets in these 01 wash basin faucets to reduce the flow from **10LPM to 5.0LPM**. The daily water used in this 01 washbasin is **0.084KL/Day.**

Water Savings Potential

It is assumed that by replacing old faucets with new nozzle spray flow regulator faucets, **0.042 KL/Day** of water can be saved in hand wash. Total 1**5.33 KL/year** of water will be saved by adding nozzle spray flow regulator faucets on existing 01 taps. The resultant

benefit in terms of energy saving workout is **Rs. 46/year** with an estimated investment of **Rs. 200** with the simple payback period of **52 months**. Water saving potential by adding nozzle spray flow regulator faucets are shown in below table:

Table 29 Estimated Water Saving Potential by Replacing Old Faucet in ETP hand wash with nozzle spray flow regulator faucets

Sr. No	Particulars	Unit	Value
1	Total No. of Wash basin in ETP	-	1
2	Total No. of Employee used wash basin in ETP	-	18
3	Present Average flow of One Faucet	LPM	10
4	Water used in wash basin for one Wash	Liter	1.17
5	Approximate No. of Times Hand Wash by Single Employee	-	4
6	Total Daily Water Consumption in Wash Basin	KL/day	0.084
7	Present Total Annual Water Consumption in Wash Basin	KL/year	30.66
8	Total Annual Water Consumption by Reducing flow to 50%	KL/year	15.33
9	Annual Monetary Saving by Reducing Flow to 50%	KL/year	15.33
10	Average Cost of Bore well Water	Rs. /KL	3.0
11	Total Annual Saving in Bore Well Water	Rs.	46
12	Estimated Investment by adding Nozzle Spray Flow Regulator to reduce flow @ Rs. 200 for Single Nozzle Spray Flow Regulator, Total No. of Hand Wash = 1	Rs.	200
13	Simple Payback period	Months	52

FLUSH TANKS

CANE YARD, MATERIAL GATE TOILET, GUEST HOUSE

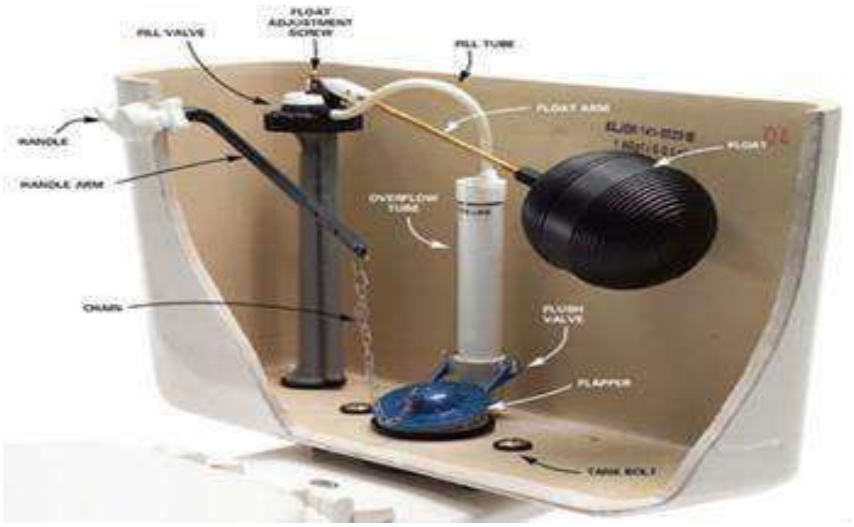
Present Scenario:

The audit team has conducted the survey of toilets available in Cane yard, material gate toilet Guest House. There are total 45 flush tanks installed in toilet, having old system of flushing by pressing push button having water consumption of 6 Litre/Flush.

Recommendation

A dual-flush toilet is a variation of the flush toilet that uses two buttons or handles to flush different levels of water. A significant way to save water in buildings is to replace single-flush toilets with dual flush toilets. The standard dual-flush toilets use six Litters of water on full and three Litters on a half- flush.

Replacing old toilets will result to a reduction of toilet water consumption. More cost-effective results can be achieved by replacing only the toilet trim system.



The total water consumption in Flush Tanks is **109.5 KL/year**, this can be reduced by 50%. Here we recommend installing dual flush system in toilets flush tanks

Water Savings Potential

It is assumed that by reducing the flow with dual flush cistern, 50% i.e. **0.015 KL/Day** of water can be saved in flush tanks. Total **54.75 KL/year** of water will be saved by adding dual type flush tanks in existing 27 tanks. The resultant benefit in terms of energy saving workout is **Rs. 165/year** with an estimated investment of **Rs. 45,000** with the simple payback period of **3272 months.** Water saving potential for installing dual flush system in all 45 flush tanks is provided in below table:

Table 30
Estimated Water Saving Potential for installing Dual Flush Cistern in 45 flush tank in Cane yard, material gate toilet

Sr. No	Particulars	Unit	Value
1	Total no of flush tank in Cane yard, Material Gate Toilet, Guest House	-	45
2	Total No. of Employee in	-	50
3	Water consumed in one flush	Liter	6
4	Approximate No. of Times Toilet use by Single Employee	-	1
5	Avg. Daily flush water requirement in toilets (25X10X1)/1000	KL/day	0.3
6	Present Total Annual Water Consumption in Flush using old system of flushing (considering 365 days) (0.3x 365 =109.5)	KL/year	109.5
7	Total Annual Water saved 50% by using dual flush cistern (109.5x 50%=54.75)	KL/year	54.75
8	Average Cost of Bore well Water	Rs. /KL	3.0
9	Total Annual Saving of Bore well Water	Rs.	165
10	Estimated Investment by adding dual flush cistern on each Toilet @ Rs. 1000 for dual flush cistern,	Rs.	45000
11	Simple Payback period	Months	3272

ACCOUNT OFFICE, ADMIN OFFICE, ADMIN VP SIR BLOCK AND GENERAL TOILET NEAR BOREWELL - 1

Present Scenario:

The audit team has conducted the survey of toilets available in the account office, admin office, admin VP sir block, General Toilet Near Borewell-1. There are total 12 flush tanks installed in toilet, having old system of flushing by pressing push button having water consumption of 8 Liter/Flush.

Recommendation

Here, we recommend installing a dual-flush toilet in the washroom. Replacing old system of flushing with dual flush toilet will result to a reduction of toilet water consumption. The total water consumption in Flush Tanks is **87.6 KL/year**; this can be reduced by 50%. Here we recommend installing dual flush system in toilets flush tanks.

Water Savings Potential

It is assumed that by adding dual flush cistern, 50% i.e. **0.12 KL/Day** of water can be saved. Total **43.8 KL/year** of water will be saved by adding dual type flush tanks in existing 07 tanks. The resultant benefit in terms of energy saving workout is **Rs. 132/year** with an estimated investment of **Rs. 12,000** with the simple payback period of **1090 months.** Water saving potential for installing dual flush system is provided in below table.

Table 31
Estimated Water Saving Potential for installing Dual Flush Cistern in 12 flush tank in account office, admin office ,admin VP sir block, General Toilet Near Borewell-1

Sr. No.	Particulars	Unit	Value
1	Total no of flush tank in account office, admin office ,admin VP sir block, General Toilet Near Borewell-1	-	12
2	Total No. of Employee in account office, admin office ,admin VP sir block, General Toilet Near Borewell-1	-	30
3	Water consumed in one flush	Liter	8
4	Approximate No. of Times Toilet use by Single Employee	-	1
5	Avg. Daily flush water requirement in toilets	KL/day	0.24
6	Present Total Annual Water Consumption in Flush using old system of flushing (considering 365 days) (0.24 x 365 =87.6)	KL/year	87.6
7	Total Annual Water saved 50% by using dual flush cistern (x 50%)	KL/year	43.8
8	Average Cost of Bore well Water	Rs. /KL	3.0
9	Total Annual Saving of Bore well Water	Rs.	132
10	Estimated Investment by adding dual flush cistern on each Toilet @ Rs. 1000 for dual flush cistern,	Rs.	12000
11	**Simple Payback period**	**Months**	**1090**

ETP PLANT, SUGAR LAB TOILET BOILING HOUSE, BOILER TOILET

Present Scenario:

The audit team has conducted the survey of toilets available in ETP Plant, Sugar Lab Toilet Boiling House, Boiler Toilet. There are total 08 flush tanks installed in toilet, having old system of flushing by pressing push button having water consumption of 11 Litre/Flush.

Recommendation

Here, we recommend installing a dual-flush toilet in the washroom. Replacing old system of flushing with dual flush toilet will result to a reduction of toilet water consumption.The total water consumption in Flush Tanks is **80.3 KL/year**, this can be reduced by 50%. Here we recommend installing dual flush system in toilets flush tanks.

Water Savings Potential

It is assumed that by adding dual flush cistern, 50% i.e. **0.11 KL/Day** of water can be saved. Total **40.15 KL/year** of water will be saved by adding dual type flush tanks in existing 07 tanks. The resultant benefit in terms of energy saving workout is **Rs. 120/year** with an estimated investment of **Rs. 8,000** with the simple payback period of **800 months.** Water saving potential for installing dual flush system is provided in below table.

Table 32
Estimated Water Saving Potential for installing Dual Flush Cistern in 08 flush tank in ETP Plant, Sugar Lab Toilet Boiling House, Boiler Toilet

Sr. No.	Particulars	Unit	Value
1	Total no of flush tank in ETP Plant, Sugar Lab Toilet Boiling House, Boiler Toilet	-	8
2	Total No. of Employee in ETP Plant, Sugar Lab Toilet Boiling House, Boiler Toilet	-	20
3	Water consumed in one flush	Liter	11
4	Approximate No. of Times Toilet use by Single Employee	-	1
5	Avg. Daily flush water requirement in toilets	KL/day	0.22
6	Present Total Annual Water Consumption in Flush using old system of flushing (considering 365 days) (0.22 x 365 =80.3)	KL/year	80.3
7	Total Annual Water saved 50% by using dual flush cistern (x 50%)	KL/year	40.15
8	Average Cost of Bore well Water	Rs. /KL	3.0
9	Total Annual Saving of Bore well Water	Rs.	120
10	Estimated Investment by adding dual flush cistern on each Toilet @ Rs. 1000 for dual flush cistern,	Rs.	8000
11	Simple Payback period	Months	800

GENERAL TIPS FOR WATER CONSERVATION

TOILET TANK BANK

With economical, maintenance free _Green Toilet Bank' it is very easy to save water on toilet flushing, it helps to save 3 litres water on every flushing, with no sacrifice on performance. Toilet Bank filled with water is hanged inside the toilet-flushing tank or reservoir. It will displace an amount of water equivalent to 3 Litres in the tank, which

Figure-16; Toilet Tank Bank

means every flush we will save water, thus saving you money. Less the water you use, the less you need to recycle.

SAVING WATER THROUGH MONITORING AND OPERATIONAL PROCEDURES

a) Identifying and Fixing Leaks

The hidden water leaks can cause loss of considerable water and energy without anyone being aware of it. A small leak can amount to large volumes of water loss. Leaks become larger with time, and they can lead to other equipment failure. Fix that leaky pipe, toilet, faucet, or roof top tank to save considerable amount of money and water. The establishment of a leak detection and repair program

would be a most cost-effective way to save money and water in the Plant premises. Following are some best practices to identify and fixing leaks:

The Management must be committed for providing the staff and resources needed to maintain plumbing fixtures and equipment on a regular basis and assuring prompt identification and repair of leaks.

- Repair staff is given the tools needed and is trained to make leak repair a priority activity.
- Staffs are taught to report leaks and other water-using equipment malfunctions promptly.
- Staffs are rewarded for success.

3095
679

- Rooftop tank overflow or leakage water should flow to rainwater gutter system not to sewage system to allow detection of rooftop water loss.
- Records of the type, location, number, and repair of leaks are kept in a central location.
-

b) Water Metering and Sub-metering

The metering and sub-metering of the Plant's water use is essential to understand the water consumption pattern inside the Plant. The accurate measurements enable management to understand maximum and minimum consumption area in the Plant and improve water efficiency in the Plant. Monitoring the water use allows management to know where and when water is being used and where the best opportunities for water savings exist. The Plant already had meters installed in their premises, however in some places such as in the RO Plant supplying Drinking Water, the meters were not functioning and hence it is recommended to replace the faulty meters with new Digital Flow meters.

CHAPTER 9
IMPLEMENTATION PLAN

IMPLEMENTATION PLAN

The Audit team has conducted detail audit of Water Sources, Consumption Area and Discharge side of Dhampur Bio Organics Limited (Unit: Asmoli, Division: Sugar)and noticed that the plant officials has maintained water sources and water treatment plant properly. There are few recommendations provided by the audit team. The recommendation/implementation plans are provided below:

ARRESTING LEAKAGES IN PLANT

During the site survey leakages were found at some of the locations. All the leakages were quantified with the help of beaker or any other form. During the field trials, **3.216 KLD** water leakages were found at 09 different locations. Approximately **1173 KL/year** of water can be saved by arresting all the leakages in the plant. It is recommended to stop all the leakages points by taking necessary action.

Sr. No	Particulars	Location	Leakage Value (liter/hr)	Running Hour	Quantity	Leakage Value (liter/day)
1	Drinking Water Leakage	Near mill house	10	24	1	240
2	Bore well -1 valve leakage	Bore well-1	120	7	1	840
3	Bore well -3 valve leakage	Bore well-2	150	7	1	1050
4	RO Membrane leakage	RO plant	28	7	1	196
5	RO Membrane leakage	RO plant	23	7	1	161
6	Canteen wash basin Leakage	Guest house	7	7	1	49
7	Guest house canteen utensil cleaning tap leakage	Guest house	8	7	1	56
8	ETP wash basin leakage	ETP LAB	15	24	1	360
9	Water Supply Pipe Leakage	Near Guest House Gate	11	24	1	264
Total Leakage (Liters / Day)						**3216**
Total Leakage (KL/day)						**3.216**

REDUCING FLOW OF FAUCETS WITH NOZZLE SPRAY FLOW REGULATOR

1. GENERAL TOILETS NEAR B/W-1 ,MILL HOUSE , CANTEEN, DM PLANT, ETP

The audit team has conducted the flow sample measurement on existing taps installed in toilets wash basin of General Toilets Near B/W-1, Mill House, Canteen, DM Plant, ETP to identify the water saving potential in faucets. It is observed that average flow of existing tap/faucets at toilet washbasin faucet is **7 Liters Per Minute (LPM)**. Faucets flows can easily be reduced without affecting the comfort of the water user. Therefore, based on sample flow measurement, we recommend installing nozzle spray flow regulator faucets in General Toilets near General Toilets Near B/W-1, Mill House, Canteen, DM Plant, ETP Toilet faucets. This will result in impressive savings of around 50-60 percent of faucets water use. Total **10 nos.** of wash basins faucets in General Toilets Near B/W-1, Mill House, Canteen, DM Plant, ETP Toilet. We recommend installing nozzle spray flow regulator faucets in these 10 wash basin faucets to reduce the flow from **7LPM to 3.5LPM**. The daily water used in these 10 wash basin is **0.18KL/Day.** It is assumed that by replacing old faucets with new nozzle spray flow regulator faucets, **0.09 KL/Day** of water can be saved in hand wash. Total **34 KL/year** of water will be saved by adding nozzle spray flow regulator faucets on existing 10 taps. The resultant benefit in terms of energy saving workout is **Rs. 102/year** with an estimated investment of **Rs. 2000** with the simple payback period of **235 months.**

Sr. No.	Particulars	Unit	Value
1	Total No. of Wash basin in General Toilets Near B/W-1, Mill House, Canteen, DM Plant, ETP	-	10
2	Total No. of Employee used wash basin in General Toilets Near B/W-1, Mill House, Canteen, DM Plant, ETP	-	50
3	Present Average flow of One Faucet	LPM	7
4	Water used in wash basin for one Wash (Approximate opening of tap ,7 secound)	Liter	0.9
5	Approximate No. of Times Hand Wash by Single Employee	-	4
6	Total Daily Water Consumption in Wash Basin	KL/day	0.18
7	Present Total Annual Water Consumption in Wash Basin (consider 365 days)	KL/year	68.0
8	Total Annual Water Consumption by Reducing flow to 50%	KL/year	34.0
9	Annual Monetary Saving by Reducing Flow to 50%	KL/year	34.0
10	Average Cost of Bore well Water	Rs. /KL	3.0
11	Total Annual Saving in Bore Well Water	Rs.	102
12	Estimated Investment by adding Nozzle Spray Flow Regulator to reduce flow @ Rs. 200 for Single Nozzle Spray Flow Regulator, Total No. of Hand Wash = 10	Rs.	2000
13	Simple Payback period	Months	235

2. CANTEEN HAND WASH

The audit team has conducted the flow sample measurement on existing taps installed in main canteen wash basin to identify the water saving potential in faucets. It is observed that average flow of existing tap/faucets at toilet washbasin faucet is **1.7 Liters Per Press (Push)**. Faucets flows can easily be reduced without affecting the comfort of the water user. Therefore, based on sample flow measurement, we recommend installing nozzle spray flow regulator faucets in main canteen hand wash. This will result in impressive savings of around 50-60 percent of faucets water use. Total **04 nos.** of wash basins faucets in main canteen were found where average flow is 1.7 Liters Per Press (Push). We recommend installing nozzle spray flow regulator faucets in these 02 wash basin faucets to reduce the flow from **1.7 Liter per Press (Push) to 0.8 Liter per Press (Push).** The daily water used in these 02 wash basin is **0.28KL/Day.** It is assumed that by replacing old faucets with new nozzle spray flow regulator faucets, **0.14 KL/Day** of water can be saved in hand wash. Total **52.5 KL/year** of water will be saved by adding nozzle spray flow regulator faucets on existing 02 taps. The resultant benefit in terms:

Sr. No.	Particulars	Unit	Value
1	Total No. of Wash basin in Canteen Hand Wash	-	4
2	Total No. of Employee used wash basin in Canteen Hand Wash	-	85
3	Water used in wash basin for one Wash	Liter	1.7
4	Approximate No. of Times Hand Wash by Single Employee	-	2
5	Total Daily Water Consumption in Wash Basin	KL/day	0.289
6	Present Total Annual Water Consumption in Wash Basin	KL/year	105. 5
7	Total Annual Water Consumption by Reducing flow to 50%	KL/year	52. 5
8	Annual Monetary Saving by Reducing Flow to 50%	KL/year	52. 5
9	Average Cost of Bore well Water	Rs. /KL	3.0
10	Total Annual Saving in Bore Well Water	Rs.	158
11	Estimated Investment by adding Nozzle Spray Flow Regulator to reduce flow @ Rs. 200 for Single Nozzle Spray Flow Regulator, Total No. of Hand Wash = 4	Rs.	800
12	Simple Payback period	Months	60

3. DM PLANT HAND WASH

The audit team has conducted the flow sample measurement on existing taps installed in canteen wash basin of Mill house hand wash to identify the water saving potential in faucets. It is observed that average DM Plant Hand Wash flow of existing tap/faucets at canteen washbasin faucet is **9.5 Liters Per Minute (LPM)**. Faucets flows can easily be

reduced without affecting the comfort of the water user. Therefore, based on sample flow measurement, we recommend installing nozzle spray flow regulator faucets in DM Plant Hand Wash faucets. This will result in impressive savings of around 50-60 percent of faucets water use. Total **01 nos.** of wash basins faucets in Mill house hand wash were found where average flow is 08 Liters Per Minute (LPM). We recommend installing nozzle spray flow regulator faucets in these 01 wash basin faucets to reduce the flow from **9.5LPM to 4.75LPM**. The daily water used in this 01 wash basin is **0.03KL/Day.** It is assumed that by replacing old faucets with new nozzle spray flow regulator faucets, **0.015 KL/Day** of water can be saved in hand wash. Total **6.4 KL/year** of water will be saved by adding nozzle spray flow regulator faucets on existing 01 taps. The resultant benefit in terms of energy saving workout is **Rs. 19/year** with an estimated investment of **Rs. 200** with the simple payback period of **125 months.**

Sr. No	Particulars	Unit	Value
1	Total No. of Wash basin in DM Plant Hand Wash	-	1
2	Total No. of Employee used wash basin in DM Plant Hand Wash	-	8
3	Present Average flow of One Faucet	LPM	9.5
4	Water used in wash basin for one Wash	Liter	1.10
5	Approximate No. of Times Hand Wash by Single Employee	-	4
6	Total Daily Water Consumption in Wash Basin	KL/day	0.03
7	Present Total Annual Water Consumption in Wash Basin	KL/year	12.0
8	Total Annual Water Consumption by Reducing flow to 50%	KL/year	6.4
9	Annual Monetary Saving by Reducing Flow to 50%	KL/year	6.4
10	Average Cost of Bore well Water	Rs. /KL	3.0
11	Total Annual Saving in Bore Well Water	Rs.	19
12	Estimated Investment by adding Nozzle Spray Flow Regulator to reduce flow @ Rs. 200 for Single Nozzle Spray Flow Regulator, Total No. of Hand Wash = 1	Rs.	200
13	Simple Payback period	Months	125

4. MILL HOUSE HANDWASH

The audit team has conducted the flow sample measurement on existing taps installed in canteen wash basin of Mill house hand wash to identify the water saving potential in faucets. It is observed that average flow of existing tap/faucets at canteen washbasin faucet is **12 Liters Per Minute (LPM)**. Faucets flows can easily be reduced without affecting the comfort of the water user. Therefore, based on sample flow measurement, we recommend installing nozzle spray flow regulator faucets in Mill house hand wash faucets. This will

result in impressive savings of around 50-60 percent of faucets water use. Total **02 nos.** of wash basins faucets in Mill house hand wash were found where average flow is 12 Liters Per Minute (LPM). We recommend installing nozzle spray flow regulator faucets in these 02 wash basin faucets to reduce the flow from **12LPM to 6.0LPM**. The daily water used in this 02 wash basin is **0.0392KL/Day.** It is assumed that by replacing old faucets with new nozzle spray flow regulator faucets, **0.0192 KL/Day** of water can be saved in hand wash. Total **7.154.0 KL/year** of water will be saved by adding nozzle spray flow regulator faucets on existing 01 taps. The resultant benefit in terms of energy saving workout is **Rs. 22/year** with an estimated investment of **Rs. 400** with the simple payback period of **223 months.**

Sr. No.	Particulars	Unit	Value
1	Total No. of Wash basin in MILL HOUSE	-	2
2	Total No. of Employee used wash basin in MILL HOUSE	-	7
3	Present Average flow of One Faucet	LPM	12
4	Water used in wash basin for one Wash	Liter	1.4
5	Approximate No. of Times Hand Wash by Single Employee	-	4
6	Total Daily Water Consumption in Wash Basin	KL/day	0.0392
7	Present Total Annual Water Consumption in Wash Basin	KL/year	14.308
8	Total Annual Water Consumption by Reducing flow to 50%	KL/year	7.154
9	Annual Monetary Saving by Reducing Flow to 50%	KL/year	7.154
10	Average Cost of Bore well Water	Rs. /KL	3.0
11	Total Annual Saving in Bore Well Water	Rs.	22
12	Estimated Investment by adding Nozzle Spray Flow Regulator to reduce flow @ Rs. 200 for Single Nozzle Spray Flow Regulator, Total No. of Hand Wash = 2	Rs.	400
13	**Simple Payback period**	**Months**	223

5. ETP HAND WASH

The audit team has conducted the flow sample measurement on existing taps installed in canteen wash basin of Mill house hand wash to identify the water saving potential in faucets. It is observed that average flow of existing tap/faucets at canteen washbasin faucet is **10 Liters Per Minute (LPM)**. Faucets flows can easily be reduced without affecting the comfort of the water user. Therefore, based on sample flow measurement, we recommend installing nozzle spray flow regulator faucets in Mill house hand wash faucets. This will result in impressive savings of around 50-60 percent of faucets water use. Total **01 nos.** of wash basins faucets in ETP hand wash were found where average flow is 10 Liters Per Minute (LPM). We recommend installing nozzle spray flow regulator faucets in these 01 wash basin faucets to reduce the flow from **10LPM to 5.0LPM**. The daily water used in this 01 washbasin is **0.084KL/Day.** It is assumed that by replacing old faucets with new nozzle

spray flow regulator faucets, **0.042 KL/Day** of water can be saved in hand wash. Total 1**5.33 KL/year** of water will be saved by adding nozzle spray flow regulator faucets on existing 01 taps. The resultant benefit in terms of energy saving workout is **Rs. 46/year** with an estimated investment of **Rs. 200** with the simple payback period of **52 months**. Water saving potential by adding nozzle spray flow regulator faucets are shown in below table:

Sr. No	Particulars	Unit	Value
1	Total No. of Wash basin in ETP	-	1
2	Total No. of Employee used wash basin in ETP	-	18
3	Present Average flow of One Faucet	LPM	10
4	Water used in wash basin for one Wash	Liter	1.17
5	Approximate No. of Times Hand Wash by Single Employee	-	4
6	Total Daily Water Consumption in Wash Basin	KL/day	0.084
7	Present Total Annual Water Consumption in Wash Basin	KL/year	30.66
8	Total Annual Water Consumption by Reducing flow to 50%	KL/year	15.33
9	Annual Monetary Saving by Reducing Flow to 50%	KL/year	15.33
10	Average Cost of Bore well Water	Rs. /KL	3.0
11	Total Annual Saving in Bore Well Water	Rs.	46
12	Estimated Investment by adding Nozzle Spray Flow Regulator to reduce flow @ Rs. 200 for Single Nozzle Spray Flow Regulator, Total No. of Hand Wash = 1	Rs.	200
13	Simple Payback period	Months	52

ADDING DUAL FLUSH TANKS IN EXISTING FLUSH TANKS

1. CANE YARD, MATERIAL GATE TOILET, GUEST HOUSE

The audit team has conducted the survey of toilets available in the Cane yard, Material Gate Toilet, Guest House. There are total 45 flush tanks installed in toilet, having old system of flushing by pressing push button having water consumption of 6 Liter/Flush. A dual-flush toilet is a variation of the flush toilet that uses two buttons or handles to flush different levels of water. A significant way to save water in buildings is to replace single-flush toilets with dual flush toilets. The standard dual-flush toilets use six Liters of water on full and three Liters on a half-flush. Replacing old toilets will result to a reduction of toilet water consumption. More cost-effective results can be achieved by replacing only the toilet trim system. The total water consumption in Flush Tanks is **109.5 KL/year**, this can be reduced by 50%. Here we recommend installing dual flush system in toilets flush tanks. It is assumed that by reducing the flow with dual flush cistern, 50% i.e. **0.015 KL/Day** of water can be saved in flush tanks. Total **54 KL/year** of water will be saved by adding dual type flush tanks in existing 45 tanks. The resultant benefit in terms of energy saving workout is

Rs. 165/year with an estimated investment of **Rs. 45,000** with the simple payback period of **3272 months.**

Sr. No	Particulars	Unit	Value
1	Total no of flush tank in Cane yard, Material Gate Toilet, Guest House	-	45
2	Total No. of Employee in	-	50
3	Water consumed in one flush	Liter	6
4	Approximate No. of Times Toilet use by Single Employee	-	1
5	Avg. Daily flush water requirement in toilets (50X6X1)/1000	KL/day	0.3
6	Present Total Annual Water Consumption in Flush using old system of flushing (considering 365 days) (0.3x 365 =109.5)	KL/year	109.5
7	Total Annual Water saved 50% by using dual flush cistern (109.5x 50%=54.75)	KL/year	54.75
8	Average Cost of Bore well Water	Rs. /KL	3.0
9	Total Annual Saving of Bore well Water	Rs.	165
10	Estimated Investment by adding dual flush cistern on each Toilet @ Rs. 1000 for dual flush cistern,	Rs.	45000
11	Simple Payback period	Months	3272

2. GENERAL TOILETS NEAR ACCOUNT OFFICE, ADMIN OFFICE, ADMIN VP SIR BLOCK AND GENERAL TOILET NEAR BOREWELL-1

The audit team has conducted the survey of toilets available in the General Toilets near account office, admin office, admin VP sir block, General Toilet Near Borewell-1and it was observed that having old system of flushing by pressing push button having water consumption of 8 Liter/Flush.. Here, we recommend installing a dual-flush toilet in the washroom. Replacing old system of flushing with dual flush toilet will result to a reduction of toilet water consumption. The total water consumption in Flush Tanks is **87.6KL/year**, this can be reduced by 50%. Here we recommend installing dual flush system in toilets flush tanks. It is assumed that by adding dual flush cistern, 50% i.e. **0.12 KL/Day** of water can be saved. Total **43.8 KL/year** of water will be saved by adding dual type flush tanks in existing 12 tanks. The resultant benefit in terms of energy saving workout is **Rs. 132/year** with an estimated investment of **Rs. 12,000** with the simple payback period of **1090 months.**

Sr. No.	Particulars	Unit	Value
1	Total no of flush tank in account office, admin office ,admin VP sir block, General Toilet Near Borewell-1	-	12
2	Total No. of Employee in account office, admin office ,admin VP sir block, General Toilet Near Borewell-1	-	30
3	Water consumed in one flush	Liter	8

4	Approximate No. of Times Toilet use by Single Employee	-	1
5	Avg. Daily flush water requirement in toilets	KL/day	0.24
6	Present Total Annual Water Consumption in Flush using old system of flushing (considering 365 days) (0.24 x 365 =87.6)	KL/year	87.6
7	Total Annual Water saved 50% by using dual flush cistern	KL/year	43.8
8	Average Cost of Bore well Water	Rs. /KL	3.0
9	Total Annual Saving of Bore well Water	Rs.	132
10	Estimated Investment by adding dual flush cistern on each Toilet @ Rs. 1000 for dual flush cistern,	Rs.	12000
11	Simple Payback period	Months	1090

2. ETP PLANT, SUGAR LAB TOILET BOILING HOUSE, BOILER TOILET

The audit team has conducted the survey of toilets available in the General Toilets near ETP Plant, Sugar Lab Toilet Boiling House, Boiler Toilet and it was observed that having old system of flushing by pressing push button having water consumption of 11 Liter/Flush. Here, we recommend installing a dual-flush toilet in the washroom. Replacing old system of flushing with dual flush toilet will result to a reduction of toilet water consumption. The total water consumption in Flush Tanks is **80.3 KL/year**, this can be reduced by 50%. Here we recommend installing dual flush system in toilets flush tanks. It is assumed that by adding dual flush cistern, 50% i.e. **0.11 KL/Day** of water can be saved. Total**40.15KL/year** of water will be saved by adding dual type flush tanks in existing 08 tanks. The resultant benefit in terms of energy saving workout is **Rs. 120/year** with an estimated investment of **Rs. 8,000** with the simple payback period of **800 months.**

Sr. No.	Particulars	Unit	Value
1	Total no of flush tank in ETP Plant, Sugar Lab Toilet Boiling House, Boiler Toilet	-	8
2	Total No. of Employee in ETP Plant, Sugar Lab Toilet Boiling House, Boiler Toilet	-	20
3	Water consumed in one flush	Liter	11
4	Approximate No. of Times Toilet use by Single Employee	-	1
5	Avg. Daily flush water requirement in toilets	KL/day	0.22
6	Present Total Annual Water Consumption in Flush using old system of flushing (considering 365 days) (0.22 x 365 =80.3)	KL/year	80.3
7	Total Annual Water saved 50% by using dual flush cistern (x 50%)	KL/year	40.15
8	Average Cost of Bore well Water	Rs. /KL	3.0
9	Total Annual Saving of Bore well Water	Rs.	120
10	Estimated Investment by adding dual flush cistern on each Toilet @ Rs. 1000 for dual flush cistern,	Rs.	8000
11	Simple Payback period	Months	800

Table 31
Summary of Implementation Plan

Sr. No.	Section/Area	Key Observations	Recommendations	Annual Water Savings (KL/year)	Annual Monetary Savings (Rs.)	Investment (Rs.)	Pay-back Period (Months)
I	**Total Bore well Water Intake**			84,519			
II	**Bore well Water Saving Achievable**			1427			
Option 1: Short Term Benefits							
1	Total Leakage in Plant	Arrest all leakage points	We recommend arresting all the leakage points. Arresting these leakage points total 1173 KL/year of water will be saved.	1173	3519		
Option 2: Long Term Benefits							
2	General Toilets Near B/W-1, Mill House, Canteen, DM Plant, ETP	Total 10 nos. of wash basins faucets in General Toilets near General Toilets Near B/W-1, Mill House, Canteen, DM Plant, ETP Toilets were found where average flow is 7 Liters Per Minute (LPM).	We recommend installing nozzle spray flow regulator faucets in these 10 wash basin faucets to reduce the flow from 7 LPM to 3.5 LPM. The daily water used in these 10 wash basin is 0.18 KL/Day.	34	102	2000	235
3	DM Plant HandWash	Total 01 nos. of wash basins faucets in DM Plant Hand Wash were	We recommend installing nozzle spray flow regulator faucets in these 01 wash basin faucets to reduce the flow from	7	19	200	125

		found where average flow is 9.2 Liters Per Minute (LPM)	9.5LPM to 4.7LPM. The daily water used in this 01 wash basin is 0.02KL/Day				
4	Mill House Hand	Total 02 nos. of wash basins faucets in Mill House Hand Wash were found where average flow is 12 Liters Per Minute (LPM)	We recommend installing nozzle spray flow regulator faucets in these 01 wash basin faucets to reduce the flow from 12LPM to 6.LPM. The daily water used in this 01 wash basin is 0.04KL/Day.	7	22	400	223
5	Wash basin of ETP	Total 01 nos. of wash basins faucets in Wash basin OF ETP were found where average flow is 10 Liters Per Minute (LPM)	We recommend installing nozzle spray flow regulator faucets in these 01 wash basin faucets to reduce the flow from 10LPM to 5.0LPM. The daily water used in this 01 wash basin is 0.04KL/Day.	15	46	200	52
6	Canteen Handwash	Total 04 nos. of wash basins faucets in main canteen were found where average flow is 1.7 Liters Per Press (Push).	We recommend installing nozzle spray flow regulator faucets in these 04 wash basin faucets to reduce the flow from 1.7 Liter per Press (Push) to 0.83 Liter per Press (Push). The daily water used in these 04 wash basin is 0.289KL/Day.	52	158	800	60
7	Total no of flush tank in Cane yard, Material Gate Toilet, Guest House	total 45 flush tanks installed in toilet, having old system of flushing by pressing push button having water consumption of 6 Litre/Flush..	Here, we recommend installing a dual-flush toilet in the washroom. this can be reduced by 50%.	55	165	45000	3272

8	Total no of flush tank in account office, admin office ,admin VP sir block, General Toilet Near Borewell-1	it was observed that having old system of flushing by pressing push button having water consumption of 08 Liter/Flush.	The total water consumption in Flush Tanks is 87.6 KL/year, this can be reduced by 50%. Here we recommend installing dual flush system in toilets flush tanks.	44	132	12000	1090
9	Total no of flush tank in ETP Plant, Sugar Lab Toilet Boiling House, Boiler Toilet	It was observed that having old system of flushing by pressing push button having water consumption of 11 Liter/Flush.	The total water consumption in Flush Tanks is 80.3 KL/year, this can be reduced by 50%. Here we recommend installing dual flush system in toilets flush tanks.	40	120	8000	800
TOTAL				1427	4283	68600	5622

CHAPTER 10

ANNEXURE (Measure data)

FLOW MEASUREMENT AT PLANT FLOW METERS

Sr.	Location of Flow Meter	ETRC flow meter reading	Plant Flow Meter reading	% Error	Type
1	Bore well No. 1 Reading	100.5	102	-1.49%	Digital
2	Bore well No. 2 Reading	99.4	98	1.41%	Digital
3	Bore well No.-3 Reading	40.8	41	-0.49%	Digital
4	ETP Inlet Flow Meter Reading	98.5	98	0.51%	Digital
5	ETP Outlet Flow Meter Reading	104.4	105	-0.57%	Digital
6	ETP RO Permeate Flow meter Reading	25.2	25	0.79%	Digital
7	ETP RO Inlet Flow Meter Reading	35.5	36	-1.41%	Digital
8	DM plant RO-30 Flow Meter Reading	40.3	40	0.74%	Digital
9	DM plant RO-50 Flow Meter Reading	70.3	70	0.43%	Digital

PERFORMANCE EVALUATION OF COOLING TOWER

Performance Evaluation of Cooling Tower			
S No	Rated Details	Unit	Process Cooling Tower
1	Application		Hot water
2	Make		Mihir engg.
3	Type		FRP type
4	Number of Fan		1
5	capacity		100 m3
Measured Parameters			
6	Hot Cooling Water Inlet to Tower from the Plant	°C	70
7	Cold Cooling Water Outlet from Tower to the Plant	°C	30
8	Air Inlet (DBT)	°C	29
9	(WBT)	°C	18.5
10	Operating Range	°C	10.0
11	Approach	°C	7.5
12	Effectiveness Of Cooling Tower	%	58
13	Remarks		

PERFORMANCE EVALUATION OF COOLING TOWER PUMP

Pump Identification	Unit	Cooling Tower Pumps
Rated Parameters		**Pump-1**
Running Status		1
Pump Make		
Model		
Speed	RPM	1450
Rated Flow	m3/hr	150
Rated Head	M	41
Rated Power	KW	45
Measured Parameters		
Measured Flow	m3/hr	145
Velocity	m/s	1.06
Discharge Pressure (A)	Kg/cm2	4.9
Suction Pressure (B)	Kg/cm2	0.23
Performance Evaluation		
Total Head (=(A-B)X10)	M	46.7
Head Utilization	%	98
Flow Utilization	%	94.2
Input power	kW	67.8
Hydraulic Power	KW	45.2
Motor Efficiency	%	94
Pump Efficiency	%	69.3
Overall (Pump Set) Efficiency	%	62.2
Suction Side Throttling	%	100% open
Discharge Side Throttling	%	100% open
Running Hour	%	24

CHAPTER 11

ANNEXURE (Data provided by Plant)

ANNNEXURE-A (FLOW METER CALIBRATION CERTIFICATE)

(TUBE WELL NO -1)

PIONEER
AUTOMATION & ENGINEERS *Total Solution For Process Control Automation*

PIONEER

3/23, UPSIDC INDS. AREA- SITE-II AJANTA COMPOUND, LONI ROAD, MOHAN NAGAR, GHAZIABAD-201007 (UP)
Mob. : 9810437595 | E-mail : pioneerautomation@yahoo.co.in, info@pioneergroups.in

FLOW METER CALIBRATION REPORT

TEST FLOW METER DATA			CALIBRATION DATA		
Customer Name	:	DHAMPUR BIO ORGANICS LTD.	Calibration Date	:	01.09.2023
Calibration Cert. Period	:	01.09.2023 TO 31.08.2024	Report Number	:	93
Instrument Serial no.	:		Fluid	:	WATER
Make/Model	:	KROHNE MARSHAL	Calibration Range	:	100 M3/HR
Meter Type	:	MAG FLOW	Calibration Type	:	4-20MA
Location	:	TUBEWELL 1-PH	Meter Size	:	150 MM

Envirement Temperature 25 Deg (+/-2 Deg)

TEST NUMBER	MAX. FLOW	METER UNDER TEST FLOW RATE M3/HR	TRANSFER STANDARD FLOW RATE M3/HR	% CALIBRATION RANGE	ERROR (%)
1	100	95	94.6	95.00	0.42
2	100	75	75.1	75.00	-0.13
3	100	50	49.8	50.00	0.40
4	100	20	19.9	20.00	0.50

Calibration Result : Error Adjustable by varing the "K" Factor of Flow Meter

Average Calibration Temperature : 44 Deg C | Average Calibration Pressure : 1.5 Bar

Calibration Method

1. The Calibration of Flow meter is done by comparison method using water as flow media.
2. The meter under test and master meters is connect serie (Ultrasonic type flow meter- detailas are attached)
3. Flow adjust is carried out by using valve in down stream line

APPROVED BY

PIONEER AUTOMATION & ENGINEERS

DATE :-01.09.2023

(TUBE WELL NO -2)

PIONEER
AUTOMATION & ENGINEERS *Total Solution For Process Control Automation*

PIONEER

3/23, UPSIDC INDS. AREA- SITE-II AJANTA COMPOUND, LONI ROAD, MOHAN NAGAR, GHAZIABAD-201007 (UP)
Mob. : 9810437595 | E-mail : pioneerautomation@yahoo.co.in, info@pioneergroups.in

FLOW METER CALIBRATION REPORT

TEST FLOW METER DATA			CALIBRATION DATA		
Customer Name	:	DHAMPUR BIO ORGANICS LTD.	Calibration Date	:	01.09.2023
Calibration Cert. Period	:	01.09.2023 TO 31.08.2024	Report Number	:	94
Instrument Serial no.	:		Fluid	:	WATER
Make/Model	:	KROHNE MARSHAL	Calibration Range	:	100 M3/HR
Meter Type	:	MAG FLOW	Calibration Type	:	4-20MA
Location	:	TUBEWELL 2-BH	Meter Size	:	150 MM

Environment Temperature 26 Deg (+/-2 Deg)

TEST NUMBER	MAX. FLOW	METER UNDER TEST FLOW RATE M3/HR	TRANSFER STANDARD FLOW RATE M3/HR	% CALIBRATION RANGE	ERROR (%)
1	100	100	99.5	100.00	0.50
2	100	75	74.65	75.00	0.47
3	100	55	54.8	54.80	0.36
4	100	26	25.92	26.00	0.31

Calibration Result : Error Adjustable by varing the "K" Factor of Flow Meter

Average Calibration Temperature : 38 Deg C | Average Calibration Pressure : 2.0 Bar

Calibration Method

1. The Calibration of Flow meter is done by comparison method using water as flow media.
2. The meter under test and master meters is connect serie (Ultrasonic type flow meter- detailas are attached)
3. Flow adjust is carried out by using valve in down stream line

APPROVED BY
PIONEER AUTOMATION & ENGINEERS
DATE :- 01.09.2023

(TUBE WELL NO -3)

PIONEER
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3/23, UPSIDC INDS. AREA- SITE-II AJANTA COMPOUND, LONI ROAD, MOHAN NAGAR, GHAZIABAD-201007 (UP)
Mob. : 9810437595 | E-mail : pioneerautomation@yahoo.co.in, info@pioneergroups.in

FLOW METER CALIBRATION REPORT

TEST FLOW METER DATA			CALIBRATION DATA		
Customer Name	:	DHAMPUR BIO ORGANICS LTD.	Calibration Date	:	01.09.2023
Calibration Cert. Period	:	01.09.2023 TO 31.08.2024	Report Number	:	95
Instrument Serial no.	:	18307	Fluid	:	WATER
Make/Model	:	EUREKA	Calibration Range	:	100 M3/HR
Meter Type	:	MAG FLOW	Calibration Type	:	4-20MA
Location	:	TUBEWELL 2- COLONY	Meter Size	:	100 MM

Enviroment Temperature 26 Deg (+/-2 Deg)

TEST NUMBER		METER UNDER TEST	TRANSFER STANDARD	% CALIBRATION RANGE	ERROR (%)
	MAX. FLOW	FLOW RATE M3/HR	FLOW RATE M3/HR		
1	100	99	98.65	99.00	0.35
2	100	75	74.72	75.00	0.37
3	100	50	49.82	50.00	0.36
4	100	25	24.85	25.00	0.60

Calibration Result : Error Adjustable by varing the "K" Factor of Flow Meter

Average Calibration Temperature : 42 Deg C | Average Calibration Pressure : 2.4 Bar

Calibration Method

1. The Calibration of Flow meter is done by comparison method using water as flow media.
2. The meter under test and master meters is connect serie (Ultrasonic type flow meter- detailas are attached)
3. Flow adjust is carried out by using valve in down stream line

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PIONEER AUTOMATION & ENGINEERS
DATE :- 01.09.2023

(ETP- OUTLET)

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321, UPSIDC INDS. AREA- SITE-II AJANTA COMPOUND, LONI ROAD, MOHAN NAGAR, GHAZIABAD-201007 (UP)
Mob. : 9810437595 | E-mail : pioneerautomation@yahoo.co.in, info@pioneergroups.in

FLOW METER CALIBRATION REPORT

TEST FLOW METER DATA		CALIBRATION DATA	
Customer Name	: DHAMPUR BIO ORGANICS LTD.	Calibration Date	: 01.09.2023
Calibration Cert. Period	: 01.09.2023 TO 31.08.2024	Report Number	: 97
Instrument Serial no.	: 1905296	Fluid	: WATER
Make /Model	: MAG FLOW 6410	Calibration Range	: 100 M3/HR
Meter Type	: ADEPT	Calibration Type	: 4-20MA
Location	: ETP OUTLET	Meter Size	: 100 MM

Environment Temperature 42 Deg (+/-2 Deg)

TEST NUMBER		METER UNDER TEST	TRANSFER STANDARD	% CALIBRATION RANGE	ERROR (%)
	MAX. FLOW	FLOW RATE M3/HR	FLOW RATE M3/HR		
1	100	98	97.62	98.00	0.39
2	100	70	69.65	70.00	0.50
3	100	50	49.78	50.00	0.44
4	100	30	29.88	30.00	0.40

Calibration Result : Error Adjustable by varing the "K" Factor of Flow Meter

Average Calibration Temperature : 43 Deg C | Average Calibration Pressure : 1.5 Bar

Calibration Method

1. The Calibration of Flow meter is done by comparison method using water as flow media.
2. The meter under test and master meters is connect serie (Ultrasonic type flow meter- detailas are attached)
3. Flow adjust is carried out by using valve in down stream line

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PIONEER AUTOMATION & ENGINEERS	
DATE : 01.09.2023	

(ETP- INLET)

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Mob. : 9810437595 | E-mail : pioneerautomation@yahoo.co.in, info@pioneergroups.in

FLOW METER CALIBRATION REPORT

TEST FLOW METER DATA		CALIBRATION DATA	
Customer Name : DHAMPUR BIO ORGANICS LTD.		Calibration Date :	01.09.2023
Calibration Cert. Period : 01.09.2023 TO 31.08.2024		Report Number :	99
Instrument Serial no. : PBD/KB310054		Fluid :	WATER
Make/Model : SIEMENS/7ML5221 1BA11		Calibration Range :	100 M3/HR
Meter Type : ULTRASONIC		Calibration Type :	4-20MA
Location : ETP INLET		Meter Size :	

Environment Temperature 26 Deg (+/-2 Deg)

TEST NUMBER	MAX. FLOW	METER UNDER TEST FLOW RATE M3/HR	TRANSPER STANDARD FLOW RATE M3/HR	% CALIBRATION RANGE	ERROR (%)
1	100	98	97.65	98.00	0.36
2	100	75	74.78	75.00	0.29
3	100	55	55.25	55.00	-0.45
4	100	25	24.95	25.00	0.20

Calibration Result : Error Adjustable by varing the "K" Factor of Flow Meter

Average Calibration Temperature : 43 Deg C | Average Calibration Pressure : 2.4 Bar

Calibration Method

1. The Calibration of Flow meter is done by comparison method using water as flow media.
2. The meter under test and master meters is connect serie (Ultrasonic type flow meter- detailas are attached)
3. Flow adjust is carried out by using valve in down stream line

APPROVED BY
PIONEER AUTOMATION & ENGINEERS
DATE :- 01.09.2023

(IRRIGATION-OUTLET)

PIONEER
AUTOMATION & ENGINEERS *Total Solution For Process Control Automation*

PIONEER

3/23, UPSIDC INDS. AREA- SITE-II,AJANTA COMPOUND, LONI ROAD, MOHAN NAGAR, GHAZIABAD-201007 (UP)
Mob. : 9810437595 | E-mail : pioneerautomation@yahoo.co.in, info@pioneergroups.in

FLOW METER CALIBRATION REPORT

TEST FLOW METER DATA		CALIBRATION DATA		
Customer Name	: DHAMPUR BIO ORGANICS LTD.	Calibration Date	:	01.09.2023
Calibration Cert. Period	: 01.09.2023 TO 31.08.2024	Report Number	:	98
Instrument Serial no.	: 3K8220140762	Fluid	:	WATER
Make/Model	: PROCESS MASTER 300	Calibration Range	:	100 M3/HR
Meter Type	: ABB	Calibration Type	:	4-20MA
Location	: IRRIGATION OUTLET	Meter Size	:	150 MM

Environment Temperature 42 Deg (+/-2 Deg)

TEST NUMBER	MAX. FLOW	METER UNDER TEST FLOW RATE M3/HR	TRANSFER STANDARD FLOW RATE M3/HR	% CALIBRATION RANGE	ERROR (%)
1	100	95	94.85	95.00	0.16
2	100	70	69.65	70.00	0.50
3	100	50	49.8	50.00	0.40
4	100	28	27.9	28.00	0.36

Calibration Result : Error Adjustable by varing the "K" Factor of Flow Meter

Average Calibration Temperature : 45 Deg C | Average Calibration Pressure : 1.0 Bar

Calibration Method

1. The Calibration of Flow meter is done by comparison method using water as flow media.
2. The meter under test and master meters is connect serie (Ultrasonic type flow meter- detailas are attached)
3. Flow adjust is carried out by using valve in down stream line

APPROVED BY	
PIONEER AUTOMATION & ENGINEERS	
DATE :- 01.09.2023	

ANNNEXURE-B (NOC-COPY)

TUBE WELL-1

GROUND WATER DEPARTMENT
(Namami Gange & Rural Water Supply Department)
Ministry of Jal Shakti
Government of Uttar Pradesh

Form 8 (C)
[See Rule 8(1)]

AUTHORIZATION/ NO-OBJECTION CERTIFICATE FOR SINKING OF NEW / EXISTING WELL FOR INDUSTRIAL/ COMMERCIAL/ INFRASTRUCTURAL OR BULK USER OF GROUND WATER

[Under Section 14 of the Uttar Pradesh Ground Water Management and Regulation Act, 2019.]

AUTHORIZATION/ NO-OBJECTION CERTIFICATE NO: NOC013653
VALID FROM 29/06/2021 TO 28/06/2026
(UIS10(1) of the Uttar Pradesh Ground Water Management and Regulation Act, 2019)

Registration No.: 202104000082			
Name of the Owner	JAGVEER SINGH		
Designation पद	Dy GM Production	**Company Name** कंपनी का नाम	DSM SUGAR ASMOLI SUGAR UNIT
Company Address कंपनी का पता	DSM Sugar Asmoli , Asmoli, Distt - Sambhal (UP)	**Authorization Letter** प्राधिकार पत्र	Download
Address of the Applicant	DSM SUGAR ASMOLI ASMOLI SAMBHAL	**Application No.**	SMBL0421N0000004
Date of Submission	06/04/2021	**Specimen Signature**	
Location Particulars			
District	Sambhal	**Block**	ASMOLI
Plot No./Khasra No.	existing premises details attached	**Municipality/Corporation**	NA
Ward No./Holding No.			NA
Particular of the Existing Well and Pumping Device			
Date of Construction/Sinking of the Well	01/04/2007		
Type of Well	Tube Well/Boring	**Depth of the Well (in meter)**	60.00
Purpose of well	Industrial	**Assembly Size(For Tube Well)**	
Strainer Position (For Tube Well)			
Type of Pump Used	Turbine	**H.P. of the Pump**	40.00
Operational Device	Electric Motor	**Rate of Withdrawal (m^3/hr.)**	100.00
Date of Energization (In Case of Electric Pump)		01/04/2007	
Maximum Allowable Rate of Withdrawal (m^3/hr.):	100.00	**Maximum Allowable Running Hours Per Day:**	4.00
Maximum Allowable Annual Extraction of Ground Water:	60000.00	**Recharge Required**	120000.00

- This No-Objection certificate authorizes the owner applicant (user) to sink a well in the location specified at Sl. (2) for extraction of ground water at a rate not exceeding that as shown at Sl. (3j), for Running Hours per day as shown at Sl. (3k), and for maximum allowable annual extraction of ground water as shown at Sl. (3k) and is valid subject to the observance of the conditions stated overleaf.
- Holder of this NOC is hereby directed to assure annual recharge of 120000.00 cubic meter, as specified under the application form within the given time period.

GENERAL CONDITIONS:

- Holder of this NOC is hereby directed to fill from 1(A) for registering his/her well within 90 days as mentioned in application form shall only started after registration of his/her NOC.
- In case of any change of ownership of the proposed well, fresh authorization has to be obtained.
- All Users abstracting ground water in excess of 100 m3/d shall be required to submit impact assessment report prepared by an accredited consultant from CGWA and National Accreditation Board for Education and Training (NABET). The report should highlight environmental risks and proposed management strategies to overcome any significant environmental issues such as ground water level decline, land subsidence etc. within three months of completion of the same to Ground Water Department Uttar Pradesh. The list of accredited Individuals/ Institutions is available on the official web-portal of CGWA.
- For the purpose of measuring and recording the quantity of ground water extracted, every said user shall affix digital water flow meters (conforming to BIS/ IS standards) having telemetry system in the abstraction structure, which record rate and quantum of extraction, at outlet of pumping devices and it shall be presumed that the quantity recorded by the meter has been extracted by the said user, until the contrary is proved. The rate of extraction of ground water from the well shall not exceed to the recorded rate from water meters.
- The concerned Authority reserves the right to stop extraction of ground water from the well due to quality hazards or any other reasons, if the situation so demands.
- In case of any change of ownership of the existing well, fresh registration has to be obtained.
- No change of location, design, rate of withdrawal and pumping device in respect of the existing well of this certificate shall be made without prior permission of the Competent Authority. Any deviation in this regard shall lead to cancellation of this registration.
- In case, any of the particulars / information furnished by the applicant in his application for issuance of this registration is found to be incorrect during verification at any subsequent stage , this registration is liable for cancellation.
- The Certificate of Authorization/ NOC shall be valid for a period of five years from the date of issue. The applicant shall have to apply for renewal through a fresh application, at least ninety days prior to expiry of its validity.
- Construction of piezometers and installation of digital water level recorders with telemetry shall be mandatory for user. Depth and zone tapped of piezometer should be commensurate with that of the pumping well. The data, obtained from digital water level recorders shall be made available to this office on monthly basis.
- **Guidelines for Installation of Piezometers and their Monitoring**

Piezometer is a borewell /tubewell used only for measuring the water level by lowering the tape/ sounder or automatic water level measuring equipment. It is also used to take water sample for water quality testing when ever needed. General guidelines for installation of piezometers are as follows:

- The piezometer is to be installed/constructed at the minimum of 50 m distance from the pumping well through which ground water is being withdrawn. The diameter of the piezometer should be about 4" to 6".
- The depth of the piezometer should be same as is case of the pumping well from which ground water is being abstracted. If, more than one piezometers are installed the second piezometer should monitor the shallow ground water regime. It will facilitate shallow as well as deeper ground water aquifer monitoring.
- No. of piezometers to be constructed & Type of water level monitoring mechanism shall be as per below table:

S.No	Quantum of Ground water withdrawal (cum/day)	No.of piezometers required	Monitring Mechanism	
			Manual	DWLR with Telemetry
1	< 10	0	0	0
2	11 - 50	1	1	0
3	50- 500	1	0	1
4	> 500	2	0	2

- The measuring frequency should be monthly and accuracy of measurement should be up to cm. the reported measurement should be given in meter upto two decimal.
- For measurement of water level sounder or automatic water level recorder (AWLR)/ Digital Automatic water level recorder (DWLR) with telemetry system should be used for accuracy.
- The measurement of water level in piezometer should be taken, only after the pumping from the surrounding tube wells has been stopped for about four to six hours.
- All the details regarding coordinates, reduced level (with respect to mean level), depth, zone taped and assembly lowered should be provided for bringing the piezometer into the Hydrograph Monitoring System for Ground Water Department, Uttar Pradesh, and for its validation.
- The ground water quality has to be monitored twice in a year during pre-monsoon (May/June) and post-monsoon (October/November) periods. Quality may be got analyzed from NABL approved lab. Besides, one sample (1 lt capacity bottle) to the concerned Director, Ground Water Department, Uttar Pradesh, for chemical analysis.
- A Permanent display board should be installed at piezometer/Tube wells site for providing the location, piezometer/ tube well number, depth and zone tapped of piezometer/tube well for standard referencing and identification.

- Any other site specific requirement regarding safety and access for measurement may be taken care of.
- Any other condition(s) that may be imposed by the concerned Authority.
- In case, any of the particulars / information furnished by the applicant in his application for issuance of this permit is found to be incorrect during verification at any subsequent stage, this permit is liable for cancellation.
-
- **SPECIFIC CONDITIONS:**
- **(A) For Industrial User:** No Objection Certificate for ground water extraction by industries shall be granted subject to the following specific conditions:
- i) No Objection Certificate shall be granted only in such cases where local government water supply agencies are not able to supply the desired quantity of water.
- ii) All industries shall be required to adopt latest water efficient technologies so as to reduce dependence on ground water resources.
- iii) All industries abstracting ground water in excess of 100 m^3/d shall be required to undertake annual water audit through Confederation of Indian Industries (CII)/ Federation Indian Chamber of Commerce and Industry (FICCI)/ National Productivity Council (NPC)/ PHD Chamber of Commerce & Industries / Laghu Udyog Bharati certified auditors and submit audit reports within three months of completion of the same to Ground Water Department Uttar Pradesh. All such industries shall be required to reduce their ground water use by at least 20% over the next five years through appropriate means.
- iv) Construction of observation well(s) (piezometer(s) within the premises and installation of appropriate water level monitoring mechanism as mentioned in General Condition no.10 shall be mandatory for industries drawing/ proposing to draw more than 10 m^3 /day of ground water and. Monitoring of water level shall be done by the project proponent. The piezometer (observation well) shall be constructed at a minimum distance of 50 m from the bore well/production well. Depth and aquifer zone tapped in the piezometer shall be the same as that of the pumping well/ wells. Monthly water level data shall be submitted online to the Ground Water Department, UP.
- v) The proponent shall be required to adopt roof top rain water harvesting/ recharge in the project premises. Industries which are likely to pollute ground water (chemical, pharmaceutical, dyes, pigments, paints, textiles, tannery, pesticides/ insecticides, fertilizers, slaughter house, explosives etc.) shall store the harvested rain water in surface storage tanks for use in the industry.
- vi) Injection of treated/ untreated waste water into aquifer system is strictly prohibited.
- vii) Industries which are likely to cause ground water pollution e.g. Tanning, Slaughter Houses, Dye, Chemical/ Petrochemical, Coal washeries, other hazardous units etc. (as per CPCB list) need to undertake necessary well head protection measures to ensure prevention of ground water pollution.
-
- **(B) Infrastructural User:** The No Objection Certificate for ground water abstraction will be granted subject to the following specific conditions:
- i) In case of infrastructure projects that require dewatering, proponent shall be required to carry out regular monitoring of dewatering discharge rate (using a digital water flow meter) and submit the data online to Ground Water Department, UP as applicable. Monitoring records and results should be retained by the proponent for two years, for inspection or reporting as required by District Ground Water Management Council.
- ii) Installation of Sewage Treatment Plants (STP) shall be mandatory for new projects, where ground water requirement is more than 20 m^3 /day. The water from STP shall be utilized for toilet flushing, car washing, gardening etc.

Date: **05/07/2021**

Place: **Sambhal**

This certificate is electronically generated and does not require digital signature

TUBE WELL-2

GROUND WATER DEPARTMENT
(Namami Gange & Rural Water Supply Department)
Ministry of Jal Shakti
Government of Uttar Pradesh

Form 8 (C)

[See Rule 8(1)]

AUTHORIZATION/ NO-OBJECTION CERTIFICATE FOR SINKING OF NEW / EXISTING WELL FOR INDUSTRIAL/ COMMERCIAL/ INFRASTRUCTURAL OR BULK USER OF GROUND WATER

[Under Section 14 of the Uttar Pradesh Ground Water Management and Regulation Act, 2019.]

AUTHORIZATION/ NO-OBJECTION CERTIFICATE NO: NOC039759

VALID FROM 29/06/2021 TO 28/06/2026

(UIS10(1) of the Uttar Pradesh Ground Water Management and Regulation Act, 2019)

Registration No.: 202104000085			
Name of the Owner	JAGVEER SINGH		
Designation पद	Dy GM Production	**Company Name** कंपनी का नाम	DSM SUGAR ASMOLI (SUGAR UNIT)
Company Address कंपनी का पता	DSM SUGAR ASMOLI, ASMOLI SAMBHAL UP,	**Authorization Letter** प्राधिकार पत्र	Download
Address of the Applicant	DSM SUGAR ASMOLI ASMOLI SAMBHAL	**Application No.**	SMBL0421NW0005
Date of Submission	06/04/2021	**Specimen Signature**	
Location Particulars			
District	Sambhal	**Block**	ASMOLI
Plot No./Khasra No.	existing Premises details attached	**Municipality\Corporation**	NA
Ward No./Holding No.			NA
Particular of the Existing Well and Pumping Device			
Date of Construction/Sinking of the Well	01/04/2007		
Type of Well	Tube Well/Boring	**Depth of the Well (in meter)**	60.00
Purpose of well	Industrial	**Assembly Size(For Tube Well)**	
Strainer Position (For Tube Well)			
Type of Pump Used	Turbine	**H.P. of the Pump**	40.00
Operational Device	Electric Motor	**Rate of Withdrawal (m^3/hr.)**	100.00
Date of Energization (In Case of Electric Pump)		01/04/2007	
Maximum Allowable Rate of Withdrawal (m^3/hr.):	100.00	**Maximum Allowable Running Hours Per Day:**	4.00
Maximum Allowable Annual Extraction of Ground Water:	80000.00	**Recharge Required**	120000.00

- This No-Objection certificate authorizes the owner applicant (user) to sink a well in the location specified at Sl. (2) for extraction of ground water at a rate not exceeding that as shown at Sl. (3j), for Running Hours per day as shown at Sl. (3k), and for maximum allowable annual extraction of ground water as shown at Sl. (3k) and is valid subject to the observance of the conditions stated overleaf.
- Holder of this NOC is hereby directed to assure annual recharge of 120000.00 cubic meter, as specified under the application form within the given time period.

GENERAL CONDITIONS:

- Holder of this NOC is hereby directed to fill from 1(A) for registering his/her well within 90 days as mentioned in application form shall only started after registration of his/her NOC.
- In case of any change of ownership of the proposed well, fresh authorization has to be obtained.
- All Users abstracting ground water in excess of 100 m3/d shall be required to submit impact assessment report prepared by an accredited consultant from CGWA and National Accreditation Board for Education and Training (NABET). The report should highlight environmental risks and proposed management strategies to overcome any significant environmental issues such as ground water level decline, land subsidence etc. within three months of completion of the same to Ground Water Department Uttar Pradesh. The list of accredited individuals/ institutions is available on the official web-portal of CGWA.
- For the purpose of measuring and recording the quantity of ground water extracted, every said user shall affix digital water flow meters (conforming to BIS/ IS standards) having telemetry system in the abstraction structure, which record rate and quantum of extraction, at outlet of pumping devices and it shall be presumed that the quantity recorded by the meter has been extracted by the said user, until the contrary is proved. The rate of extraction of ground water from the well shall not exceed to the recorded rate from water meters.
- The concerned Authority reserves the right to stop extraction of ground water from the well due to quality hazards or any other reasons, if the situation so demands.
- In case of any change of ownership of the existing well, fresh registration has to be obtained.
- No change of location, design, rate of withdrawal and pumping device in respect of the existing well of this certificate shall be made without prior permission of the Competent Authority. Any deviation in this regard shall lead to cancellation of this registration.
- In case, any of the particulars / information furnished by the applicant in his application for issuance of this registration is found to be incorrect during verification at any subsequent stage , this registration is liable for cancellation.
- The Certificate of Authorization/ NOC shall be valid for a period of five years from the date of issue. The applicant shall have to apply for renewal through a fresh application, at least ninety days prior to expiry of its validity.
- Construction of piezometers and installation of digital water level recorders with telemetry shall be mandatory for user. Depth and zone tapped of piezometer should be commensurate with that of the pumping well. The data, obtained from digital water level recorders shall be made available to this office on monthly basis.
- **Guidelines for Installation of Piezometers and their Monitoring**

Piezometer is a borewell /tubewell used only for measuring the water level by lowering the tape/ sounder or automatic water level measuring equipment. It is also used to take water sample for water quality testing when ever needed. General guidelines for installation of piezometers are as follows:

- The piezometer is to be installed/constructed at the minimum of 50 m distance from the pumping well through which ground water is being withdrawn. The diameter of the piezometer should be about 4" to 6".
- The depth of the piezometer should be same as is case of the pumping well from which ground water is being abstracted. If, more than one piezometers are installed the second piezometer should monitor the shallow ground water regime. It will facilitate shallow as well as deeper ground water aquifer monitoring.
- No. of piezometers to be constructed & Type of water level monitoring mechanism shall be as per below table:

S.No	Quantum of Ground water withdrawal (cum/day)	No.of piezometers required	Monitring Mechanism	
			Manual	DWLR with Telemetry
1	< 10	0	0	0
2	11 - 50	1	1	0
3	50- 500	1	0	1
4	> 500	2	0	2

- The measuring frequency should be monthly and accuracy of measurement should be up to cm. the reported measurement should be given in meter upto two decimal.
- For measurement of water level sounder or automatic water level recorder (AWLR)/ Digital Automatic water level recorder (DWLR) with telemetry system should be used for accuracy.
- The measurement of water level in piezometer should be taken, only after the pumping from the surrounding tube wells has been stopped for about four to six hours.
- All the details regarding coordinates, reduced level (with respect to mean level), depth, zone taped and assembly lowered should be provided for bringing the piezometer into the Hydrograph Monitoring System for Ground Water Department, Uttar Pradesh, and for its validation.
- The ground water quality has to be monitored twice in a year during pre-monsoon (May/June) and post-monsoon (October/November) periods. Quality may be got analyzed from NABL approved lab. Besides, one sample (1 lt capacity bottle) to the concerned Director, Ground Water Department, Uttar Pradesh, for chemical analysis.
- A Permanent display board should be installed at piezometer/Tube wells site for providing the location, piezometer/ tube well number, depth and zone tapped of piezometer/tube well for standard referencing and identification.

- Any other site specific requirement regarding safety and access for measurement may be taken care of.
- Any other condition(s) that may be imposed by the concerned Authority.
- In case, any of the particulars / information furnished by the applicant in his application for issuance of this permit is found to be incorrect during verification at any subsequent stage, this permit is liable for cancellation.
-
- **SPECIFIC CONDITIONS:**
- **(A) For Industrial User:** No Objection Certificate for ground water extraction by industries shall be granted subject to the following specific conditions:
- i) No Objection Certificate shall be granted only in such cases where local government water supply agencies are not able to supply the desired quantity of water.
- ii) All industries shall be required to adopt latest water efficient technologies so as to reduce dependence on ground water resources.
- iii) All industries abstracting ground water in excess of 100 m^3/d shall be required to undertake annual water audit through Confederation of Indian Industries (CII)/ Federation Indian Chamber of Commerce and Industry (FICCI)/ National Productivity Council (NPC)/ PHD Chamber of Commerce & Industries / Laghu Udyog Bharati certified auditors and submit audit reports within three months of completion of the same to Ground Water Department Uttar Pradesh. All such industries shall be required to reduce their ground water use by at least 20% over the next five years through appropriate means.
- iv) Construction of observation well(s) (piezometer(s)) within the premises and installation of appropriate water level monitoring mechanism as mentioned in General Condition no.10 shall be mandatory for industries drawing/ proposing to draw more than 10 m^3 /day of ground water and. Monitoring of water level shall be done by the project proponent. The piezometer (observation well) shall be constructed at a minimum distance of 50 m from the bore well/production well. Depth and aquifer zone tapped in the piezometer shall be the same as that of the pumping well/ wells. Monthly water level data shall be submitted online to the Ground Water Department, UP.
- v) The proponent shall be required to adopt roof top rain water harvesting/ recharge in the project premises. Industries which are likely to pollute ground water (chemical, pharmaceutical, dyes, pigments, paints, textiles, tannery, pesticides/ insecticides, fertilizers, slaughter house, explosives etc.) shall store the harvested rain water in surface storage tanks for use in the industry.
- vi) Injection of treated/ untreated waste water into aquifer system is strictly prohibited.
- vii) Industries which are likely to cause ground water pollution e.g. Tanning, Slaughter Houses, Dye, Chemical/ Petrochemical, Coal washeries, other hazardous units etc. (as per CPCB list) need to undertake necessary well head protection measures to ensure prevention of ground water pollution.
-
- **(B) Infrastructural User:** The No Objection Certificate for ground water abstraction will be granted subject to the following specific conditions:
- i) In case of infrastructure projects that require dewatering, proponent shall be required to carry out regular monitoring of dewatering discharge rate (using a digital water flow meter) and submit the data online to Ground Water Department, UP as applicable. Monitoring records and results should be retained by the proponent for two years, for inspection or reporting as required by District Ground Water Management Council.
- ii) Installation of Sewage Treatment Plants (STP) shall be mandatory for new projects, where ground water requirement is more than 20 m^3 /day. The water from STP shall be utilized for toilet flushing, car washing, gardening etc.

Date :**05/07/2021**

Place:**Sambhal**

This certificate is electronically generated and does not require digital signature

TUBE WELL-3

GROUND WATER DEPARTMENT
(Namami Gange & Rural Water Supply Department)
Ministry of Jal Shakti
Government of Uttar Pradesh

Form 8 (C)

[See Rule 8(1)]

AUTHORIZATION/ NO-OBJECTION CERTIFICATE FOR SINKING OF NEW / EXISTING WELL FOR INDUSTRIAL/ COMMERCIAL/ INFRASTRUCTURAL OR BULK USER OF GROUND WATER

[Under Section 14 of the Uttar Pradesh Ground Water Management and Regulation Act, 2019.]

AUTHORIZATION/ NO-OBJECTION CERTIFICATE NO: NOC034938

VALID FROM 29/06/2021 TO 28/06/2026

(UIS10(1) of the Uttar Pradesh Ground Water Management and Regulation Act, 2019)

Registration No.: 202104060117			
Name of the Owner	JAGVEER SINGH		
Designation पद	Dy GM Production	**Company Name** कंपनी का नाम	Jagveer Singh
Company Address कंपनी का पता	DSM SUGAR ASMOLI ASMOLI SAMBHAL UP SHAMBHAL,	**Authorization Letter** प्राधिकार पत्र	Download
Address of the Applicant	DSM SUGAR ASMOLI ASMOLI SAMBHAL	**Application No.**	SMBL0421NF0006
Date of Submission	06/04/2021	**Specimen Signature**	
Location Particulars			
District	Sambhal	**Block**	ASMOLI
Plot No./Khasra No.	existing Premises details attached	**Municipality/Corporation**	NA
Ward No./Holding No.			NA
Particular of the Existing Well and Pumping Device			
Date of Construction/Sinking of the Well	01/04/2007		
Type of Well	Tube Well/Boring	**Depth of the Well (in meter)**	60.00
Purpose of well	Industrial	**Assembly Size(For Tube Well)**	
Strainer Position (For Tube Well)			
Type of Pump Used	Submersible	**H.P. of the Pump**	15.00
Operational Device	Electric Motor	**Rate of Withdrawal (m^3/hr.)**	40.00
Date of Energization (In Case of Electric Pump)		01/04/2007	
Maximum Allowable Rate of Withdrawal (m^3/hr.):	40.00	**Maximum Allowable Running Hours Per Day:**	3.00
Maximum Allowable Annual Extraction of Ground Water:	18000.00	**Recharge Required**	36000.00

- This No-Objection certificate authorizes the owner applicant (user) to sink a well in the location specified at Sl. (2) for extraction of ground water at a rate not exceeding that as shown at Sl. (3j), for Running Hours per day as shown at Sl. (3k), and for maximum allowable annual extraction of ground water as shown at Sl. (3k) and is valid subject to the observance of the conditions stated overleaf.
- Holder of this NOC is hereby directed to assure annual recharge of 36000.00 cubic meter, as specified under the application form within the given time period.

GENERAL CONDITIONS:

- Holder of this NOC is hereby directed to fill from 1(A) for registering his/her well within 90 days as mentioned in application form shall only started after registration of his/her NOC.
- In case of any change of ownership of the proposed well, fresh authorization has to be obtained.
- All Users abstracting ground water in excess of 100 m3/d shall be required to submit impact assessment report prepared by an accredited consultant from CGWA and National Accreditation Board for Education and Training (NABET). The report should highlight environmental risks and proposed management strategies to overcome any significant environmental issues such as ground water level decline, land subsidence etc. within three months of completion of the same to Ground Water Department Uttar Pradesh. The list of accredited individuals/ institutions is available on the official web-portal of CGWA.
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- The concerned Authority reserves the right to stop extraction of ground water from the well due to quality hazards or any other reasons, if the situation so demands.
- In case of any change of ownership of the existing well, fresh registration has to be obtained.
- No change of location, design, rate of withdrawal and pumping device in respect of the existing well of this certificate shall be made without prior permission of the Competent Authority. Any deviation in this regard shall lead to cancellation of this registration.
- In case, any of the particulars / information furnished by the applicant in his application for issuance of this registration is found to be incorrect during verification at any subsequent stage , this registration is liable for cancellation.
- The Certificate of Authorization/ NOC shall be valid for a period of five years from the date of issue. The applicant shall have to apply for renewal through a fresh application, at least ninety days prior to expiry of its validity.
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S No	Quantum of Ground water withdrawal (cum/day)	No of piezometers required	Monitring Mechanism	
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1	< 10	0	0	0
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3	50- 500	1	0	1
4	> 500	2	0	2

- The measuring frequency should be monthly and accuracy of measurement should be up to cm. the reported measurement should be given in meter upto two decimal.
- For measurement of water level sounder or automatic water level recorder (AWLR)/ Digital Automatic water level recorder (DWLR) with telemetry system should be used for accuracy.
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- All the details regarding coordinates, reduced level (with respect to mean level), depth, zone taped and assembly lowered should be provided for bringing the piezometer into the Hydrograph Monitoring System for Ground Water Department, Uttar Pradesh, and for its validation.
- The ground water quality has to be monitored twice in a year during pre-monsoon (May/June) and post-monsoon (October/November) periods. Quality may be got analyzed from NABL approved lab. Besides, one sample (1 lt capacity bottle) to the concerned Director, Ground Water Department, Uttar Pradesh, for chemical analysis.
- A Permanent display board should be installed at piezometer/Tube wells site for providing the location, piezometer/ tube well number, depth and zone tapped of piezometer/tube well for standard referencing and identification.

- Any other site specific requirement regarding safety and access for measurement may be taken care of.

- Any other condition(s) that may be imposed by the concerned Authority.
- In case, any of the particulars / information furnished by the applicant in his application for issuance of this permit is found to be incorrect during verification at any subsequent stage, this permit is liable for cancellation.
-
- **SPECIFIC CONDITIONS:**
- **(A) For Industrial User:** No Objection Certificate for ground water extraction by industries shall be granted subject to the following specific conditions:
- i) No Objection Certificate shall be granted only in such cases where local government water supply agencies are not able to supply the desired quantity of water.
- ii) All industries shall be required to adopt latest water efficient technologies so as to reduce dependence on ground water resources.
- iii) All industries abstracting ground water in excess of 100 m^3/d shall be required to undertake annual water audit through Confederation of Indian Industries (CII)/ Federation Indian Chamber of Commerce and Industry (FICCI)/ National Productivity Council (NPC)/ PHD Chamber of Commerce & Industries / Laghu Udyog Bharati certified auditors and submit audit reports within three months of completion of the same to Ground Water Department Uttar Pradesh. All such industries shall be required to reduce their ground water use by at least 20% over the next five years through appropriate means.
- iv) Construction of observation well(s) (piezometer)(s) within the premises and installation of appropriate water level monitoring mechanism as mentioned in General Condition no.10 shall be mandatory for industries drawing/ proposing to draw more than 10 m^3 /day of ground water and. Monitoring of water level shall be done by the project proponent. The piezometer (observation well) shall be constructed at a minimum distance of 50 m from the bore well/production well. Depth and aquifer zone tapped in the piezometer shall be the same as that of the pumping well/ wells. Monthly water level data shall be submitted online to the Ground Water Department, UP.
- v) The proponent shall be required to adopt roof top rain water harvesting/ recharge in the project premises. Industries which are likely to pollute ground water (chemical, pharmaceutical, dyes, pigments, paints, textiles, tannery, pesticides/ insecticides, fertilizers, slaughter house, explosives etc.) shall store the harvested rain water in surface storage tanks for use in the industry.
- vi) Injection of treated/ untreated waste water into aquifer system is strictly prohibited.
- vii) Industries which are likely to cause ground water pollution e.g. Tanning, Slaughter Houses, Dye, Chemical/ Petrochemical, Coal washeries, other hazardous units etc. (as per CPCB list) need to undertake necessary well head protection measures to ensure prevention of ground water pollution.
-
- **(B) Infrastructural User:** The No Objection Certificate for ground water abstraction will be granted subject to the following specific conditions:
- i) In case of infrastructure projects that require dewatering, proponent shall be required to carry out regular monitoring of dewatering discharge rate (using a digital water flow meter) and submit the data online to Ground Water Department, UP as applicable. Monitoring records and results should be retained by the proponent for two years, for inspection or reporting as required by District Ground Water Management Council.
- ii) Installation of Sewage Treatment Plants (STP) shall be mandatory for new projects, where ground water requirement is more than 20 m^3 /day. The water from STP shall be utilized for toilet flushing, car washing, gardening etc.

Date **05/07/2021**

Place **Sambhal**

This certificate is electronically generated and does not require digital signature

ANNNEXURE-C (GROUND WATER TESTING REPORT)

(POSTMONSOON GROUND WATER TEST REPORT)

(OCT-2023)

TUBEWELL-1

ENVIRONMENTAL AND TECHNICAL RESEARCH CENTRE
Office & Laboratory: 2/261, Vishwas Khand, Gomti Nagar, Lucknow- 226 010 (U.P.)
Email : ETRCLTH@YAHOO.IN, Web: www.etrcindia.com
ISO 9001:2015, ISO 14001 : 2015, OHSAS 18001 : 2007
An Approved Laboratory from Ministry of Environment, Forest and Climate change, Govt. of India under EPA 1986

ETRC/PM09/TEST-REP/FT/45

TEST REPORT
WATER & WASTE WATER ANALYSIS

Test Report Ref No. ETRC/EPA/9600/2023	**Date of Report:** 18.10.2023
Name /Address/Type of Industry	**M/s Dhampur Bio-organics Limited** **Unit: Asmoli, Division Sugar** **Village: Asmoli** **Tehsil: & District: Sambhal (U.P.) - 244304**

SAMPLE DETAILS

1	Water/ Waste Water	Ground Water	5	Packing Condition	Sealed
2	Sample Description	**Borewell No. 01**	6	Sample Collected By	Industry Self
3	Sample received date	13.10.2023	7	Analysis Start Date	13.10.2023
4	Sample Quantity	5.0 liters	8	Analysis End Date	17.10.2023

TEST RESULT

Sr. No	Test Parameter	Unit	Protocol/Test Method	Result	Range of testing /limit of detection	Indian Standard 10500: 2012	
						Desirable	Permissible
	Physico-chemical Parameters						
1	Colour	Hazen	IS: 3025 (Part-4): 2021	<5.0	5 - 30	5	15
2	Odour	-	IS: 3025 (Part-5): 2018	Agreeable	Qualitative	Agreeable	Agreeable
3	pH	-	APHA 24nd Ed. 2023 - 4500 H^+	7.5	1 - 14	6.5-8.5	No Relaxation
4	Turbidity	NTU	APHA 24th Ed. 2023 - 2130 B	BDL	2 - 40	1	5
5	Total Dissolved Solids (TDS)	mg/l	IS: 3025 (Part-16): 2023	402.2	10 - 5000	500	2000
6	Ammonia (as total ammonia-N)	mg/l	APHA 24th Ed. 2023 - 4500-NH_3 F	BDL	0.5 - 2.0	0.5	No Relaxation
7	Anionic Detergents (as MBAS)	mg/l	APHA 24th Ed. 2023 - 5540 C	BDL	0.05 - 0.5	0.2	1.0
8	Calcium as Ca	mg/l	IS: 3025 (Part-40): 1991 Reaffirmed: 2019	59.2	2.0 - 600	75	200
9	Magnesium as Mg	mg/l	APHA 24th Ed. 2023 - 3500 Mg, B	26.24	0.1 - 400	30	100
10	Chloride as Cl	mg/l	APHA 24th Ed. 2023 - 4500-Cl^- B	28.0	2.0 - 2000	250	1000
11	Fluoride as F	mg/l	APHA 24th Ed. 2023 - 4500 F C	0.40	0.02 - 5.0	1.0	1.5
12	Free Residual Chlorine	mg/l	IS: 3025 (Part-26): 1986 Reaffirmed: 2019	BDL	0.1 - 5.0	0.2	1.0
13	Nitrate as NO_3	mg/l	IS: 3025 (Part-34): 1986 Reaffirmed: 2019	BDL	1.0 - 70	45	No Relaxation
14	Phenolic Compound (as C_6H_5OH)	mg/l	APHA 24th Ed. 2023 - 5530 C	BDL	0.001-0.005	0.001	0.002
15	Sulphate as SO_4	mg/l	APHA 24th Ed. 2023 - 4500- SO_4^{2-}	26.0.0	1.0 - 500	200	400
16	Alkalinity as $CaCO_3$	mg/l	APHA 24th Ed. 2023 - 2320 B	288.0	2.0 - 1000	200	600
17	Total Hardness as $CaCO_3$	mg/l	APHA 24th Ed. 2023 - 2340 C	256.0	5.0 - 800	200	600
18	Aluminium as Al	mg/l	APHA 24th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.015 - 5.0	0.03	0.2
19	Boron as B	mg/l	APHA 24th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.05 - 2.0	0.5	1.0
20	Copper as Cu	mg/l	APHA 24th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.03 - 10	0.05	1.5
21	Iron as Fe	mg/l	APHA 24th Ed. 2023 - 3120 B (ICP-OES)	0.14	0.05 - 20	0.3	No Relaxation

Page 1 of 2

Regd. Address: 4/57, Vipul Khand, Gomti Nagar, Lucknow - 226010 (U.P.) Mob: 09897674227

ENVIRONMENTAL AND TECHNICAL RESEARCH CENTRE
Office & Laboratory: 2/261, Vishwas Khand, Gomti Nagar, Lucknow- 226 010 (U.P.)
Email : ETRCLTH@YAHOO.IN, Web: www.etrcindia.com
ISO 9001:2015, ISO 14001 : 2015, OHSAS 18001 : 2007
An Approved Laboratory from Ministry of Environment, Forest and Climate change, Govt. of India under EPA 1986

Test Report Ref No. ETRC/EPA/9600/2023

22	**Manganese as Mn**	mg/l	APHA 24th Ed. 2023 - 3120 B (ICP-OES)	**0.07**	0.02 - 5.0	0.1	0.3
23	**Zinc as Zn**	mg/l	APHA 24th Ed. 2023 - 3120 B (ICP-OES)	**0.48**	0.05 - 15	5	15
24	**Cadmium as Cd**	mg/l	APHA 24th Ed. 2023 - 3120 B (ICP-OES)	**BDL**	0.05 - 2.0	0.003	No Relaxation
25	**Lead as Pb**	mg/l	APHA 24th Ed. 2023 - 3120 B (ICP-OES)	**BDL**	0.01 - 10	0.01	No Relaxation
26	**Mercury as Hg**	µg/l	APHA 24th Ed. 2023 - 3112 B	**BDL**	0.5 - 1000	1.0	No Relaxation
27	**Nickel as Ni**	mg/l	APHA 24th Ed. 2023 - 3120 B (ICP-OES)	**BDL**	0.05 - 5.0	0.02	No Relaxation
28	**Arsenic as As**	mg/l	APHA 24th Ed. 2023 - 3120 B (ICP-OES)	**BDL**	0.02 - 2.0	0.01	0.05
29	**Total Chromium**	mg/l	APHA 24th Ed. 2023 - 3120 B (ICP-OES)	**BDL**	0.03 - 5.0	0.05	No Relaxation
			Microbiological Parameters				
30	**E. coli**	MPN/ 100 ml	IS: 1622 - 1981 Reaffirmed: 2019	**Absent**	1.8 - 1600	Shall not be detected in any 100 ml sample	
31	**T. coli**	MPN/ 100 ml	IS: 1622 - 1981 Reaffirmed: 2019	**Absent**	1.8 - 1600	Shall not be detected in any 100 ml sample	

BDL=Below Detection Limit

.....END OF REPORT.....

- ETRC warrants that all analytical work is conducted professionally in accordance with all applicable standard laboratory practices and that the data reflects our best attempt to generate accurate results for the sample, mentioned in the report as above.
- The result relate only to the items tested.
- ETRC does not assume any liability for any claims or damages related to the quality of parameter analyzed in the results and/or the performance of the equipment constituting to the results.
- All disputes subject to Lucknow jurisdiction.
- This report is not to be reproduced wholly or in part and cannot be used as evidence in the court of law and should not be used in any advertising media without our special permission in writing.
- Complain register is available in our laboratory.

Authorized Signatory
(Sandeep Kr Verma)
Lab-Incharge

Authorized Signatory
(Ritu Garg)
QM

Regd. Address: 4/57, Vipul Khand, Gomti Nagar, Lucknow - 226010 (U.P.) Mob: 09897674227

ENVIRONMENTAL AND TECHNICAL RESEARCH CENTRE
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ETRC/PM09/TEST-REP/FT/45

TEST REPORT
WATER & WASTE WATER ANALYSIS

Test Report Ref No. ETRC/EPA/9601/2023	**Date of Report:** 18.10.2023
Name /Address/Type of Industry	**M/s Dhampur Bio-organics Limited** **Unit: Asmoli, Division Sugar** **Village: Asmoli** **Tehsil: & District: Sambhal (U.P.) - 244304**

SAMPLE DETAILS

1	Water/ Waste Water	Ground Water	5	Packing Condition	Sealed
2	Sample Description	**Borewell No. 02**	6	Sample Collected By	Industry Self
3	Sample received date	13.10.2023	7	Analysis Start Date	13.10.2023
4	Sample Quantity	5.0 liters	8	Analysis End Date	17.10.2023

TEST RESULT

Sr. No	Test Parameter	Unit	Protocol/Test Method	Result	Range of testing /limit of detection	Indian Standard 10500: 2012	
						Desirable	Permissible
	Physico-chemical Parameters						
1	**Colour**	Hazen	IS: 3025 (Part-4): 2021	**<5.0**	5 - 30	5	15
2	**Odour**	-	IS: 3025 (Part-5): 2018	**Agreeable**	Qualitative	Agreeable	Agreeable
3	**pH**	-	APHA 24th Ed. 2023 - 4500 H^+	**7.4**	1 - 14	6.5-8.5	No Relaxation
4	**Turbidity**	NTU	APHA 24th Ed. 2023 - 2130 B	**BDL**	2 - 40	1	5
5	**Total Dissolved Solids (TDS)**	mg/l	IS: 3025 (Part-16): 2023	**404.8**	10 - 5000	500	2000
6	**Ammonia (as total ammonia-N)**	mg/l	APHA 24th Ed. 2023 - 4500-NH_3 F	**BDL**	0.5 - 2.0	0.5	No Relaxation
7	**Anionic Detergents (as MBAS)**	mg/l	APHA 24th Ed. 2023 - 5540 C	**BDL**	0.05 - 0.5	0.2	1.0
8	**Calcium as Ca**	mg/l	IS: 3025 (Part-40): 1991 Reaffirmed: 2019	**62.4**	2.0 - 600	75	200
9	**Magnesium as Mg**	mg/l	APHA 24th Ed. 2023 - 3500 Mg, B	**30.13**	0.1 - 400	30	100
10	**Chloride as Cl**	mg/l	APHA 24th Ed. 2023 - 4500-Cl^- B	**26.0**	2.0 - 2000	250	1000
11	**Fluoride as F**	mg/l	APHA 24th Ed. 2023 - 4500 F^- C	**0.40**	0.02 - 5.0	1.0	1.5
12	**Free Residual Chlorine**	mg/l	IS: 3025 (Part-26): 1986 Reaffirmed: 2019	**BDL**	0.1 - 5.0	0.2	1.0
13	**Nitrate as NO_3**	mg/l	IS: 3025 (Part-34): 1986 Reaffirmed: 2019	**BDL**	1.0 - 70	45	No Relaxation
14	**Phenolic Compound (as C_6H_5OH)**	mg/l	APHA 24th Ed. 2023 - 5530 C	**BDL**	0.001-0.005	0.001	0.002
15	**Sulphate as SO_4**	mg/l	APHA 24th Ed. 2023 - 4500- SO_4^{2-}	**28.0**	1.0 - 500	200	400
16	**Alkalinity as $CaCO_3$**	mg/l	APHA 24th Ed. 2023 - 2320 B	**296.0**	2.0 - 1000	200	600
17	**Total Hardness as $CaCO_3$**	mg/l	APHA 24th Ed. 2023 - 2340 C	**280.0**	5.0 - 600	200	600
18	**Aluminium as Al**	mg/l	APHA 24th Ed. 2023 - 3120 B (ICP-OES)	**BDL**	0.015 - 5.0	0.03	0.2
19	**Boron as B**	mg/l	APHA 24th Ed. 2023 - 3120 B (ICP-OES)	**BDL**	0.05 - 2.0	0.5	1.0
20	**Copper as Cu**	mg/l	APHA 24th Ed. 2023 - 3120 B (ICP-OES)	**BDL**	0.03 - 10	0.05	1.5
21	**Iron as Fe**	mg/l	APHA 24th Ed. 2023 - 3120 B (ICP-OES)	**0.16**	0.06 - 20	0.3	No Relaxation

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Test Report Ref No. ETRC/EPA/9601/2023

22	**Manganese as Mn**	mg/l	APHA 24th Ed. 2023 - 3120 B (ICP-OES)	**0.02**	0.02 - 5.0	0.1	0.3
23	**Zinc as Zn**	mg/l	APHA 24th Ed. 2023 - 3120 B (ICP-OES)	**0.66**	0.05 - 15	5	15
24	**Cadmium as Cd**	mg/l	APHA 24th Ed. 2023 - 3120 B (ICP-OES)	**BDL**	0.05 - 2.0	0.003	No Relaxation
25	**Lead as Pb**	mg/l	APHA 24th Ed. 2023 - 3120 B (ICP-OES)	**BDL**	0.01 - 10	0.01	No Relaxation
26	**Mercury as Hg**	µg/l	APHA 24th Ed. 2023 - 3112 B	**BDL**	0.5 - 1000	1.0	No Relaxation
27	**Nickel as Ni**	mg/l	APHA 24th Ed. 2023 - 3120 B (ICP-OES)	**BDL**	0.05 - 5.0	0.02	No Relaxation
28	**Arsenic as As**	mg/l	APHA 24th Ed. 2023 - 3120 B (ICP-OES)	**BDL**	0.02 - 2.0	0.01	0.05
29	**Total Chromium**	mg/l	APHA 24th Ed. 2023 - 3120 B (ICP-OES)	**BDL**	0.03 - 5.0	0.05	No Relaxation
	Microbiological Parameters						
30	**E. coli**	MPN/ 100 ml	IS: 1622 - 1981 Reaffirmed: 2019	**Absent**	1.8 - 1600	Shall not be detected in any 100 ml sample	
31	**T. coli**	MPN/ 100 ml	IS: 1622 - 1981 Reaffirmed: 2019	**Absent**	1.8 - 1600	Shall not be detected in any 100 ml sample	

BDL=Below Detection Limit

..... **END OF REPORT** .....

- ETRC warrants that all analytical work is conducted professionally in accordance with all applicable standard laboratory practices and that the data reflects our best attempt to generate accurate results for the sample, mentioned in the report as above.
- The result relate only to the items tested.
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Authorized Signatory
(Sandeep Kr Verma)
Lab-Incharge

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Authorized Signatory
(Ritu Garg)
QM

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TUBEWELL-3

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ETRC/PM09/TEST-REP/FT/45

TEST REPORT
WATER & WASTE WATER ANALYSIS

Test Report Ref No. ETRC/EPA/9602/2023	**Date of Report:** 18.10.2023
Name /Address/Type of Industry	**M/s Dhampur Bio-organics Limited** **Unit: Asmoli, Division Sugar** **Village: Asmoli** **Tehsil: & District: Sambhal (U.P.) - 244304**

SAMPLE DETAILS

1	Water/ Waste Water	Ground Water	5	Packing Condition	Sealed
2	Sample Description	**Borewell No. 03**	6	Sample Collected By	Industry Self
3	Sample received date	13.10.2023	7	Analysis Start Date	13.10.2023
4	Sample Quantity	5.0 liters	8	Analysis End Date	17.10.2023

TEST RESULT

Sr. No	Test Parameter	Unit	Protocol/Test Method	Result	Range of testing /limit of detection	Indian Standard 10500: 2012	
						Desirable	Permissible
	Physico-chemical Parameters						
1	Colour	Hazen	IS: 3025 (Part-4): 2021	<5.0	5 - 30	5	15
2	Odour	-	IS: 3025 (Part-5): 2018	Agreeable	Qualitative	Agreeable	Agreeable
3	pH	-	APHA 24th Ed. 2023 - 4500 H^+	7.5	1 - 14	6.5-8.5	No Relaxation
4	Turbidity	NTU	APHA 24th Ed. 2023 - 2130 B	BDL	2 - 40	1	5
5	Total Dissolved Solids (TDS)	mg/l	IS: 3025 (Part-16): 2023	408.4	10 - 5000	500	2000
6	Ammonia (as total ammonia-N)	mg/l	APHA 24th Ed. 2023 - 4500-NH_3 F	BDL	0.5 - 2.0	0.5	No Relaxation
7	Anionic Detergents (as MBAS)	mg/l	APHA 24th Ed. 2023 - 5540 C	BDL	0.05 - 0.5	0.2	1.0
8	Calcium as Ca	mg/l	IS: 3025 (Part-40): 1991 Reaffirmed: 2019	56.0	2.0 - 600	75	200
9	Magnesium as Mg	mg/l	APHA 24th Ed. 2023 - 3500 Mg, B	31.10	0.1 - 400	30	100
10	Chloride as Cl	mg/l	APHA 24th Ed. 2023 - 4500-Cl B	30.0	2.0 - 2000	250	1000
11	Fluoride as F	mg/l	APHA 24th Ed. 2023 - 4500 F C	0.42	0.02 - 5.0	1.0	1.5
12	Free Residual Chlorine	mg/l	IS: 3025 (Part-26): 1986 Reaffirmed: 2019	BDL	0.1 - 5.0	0.2	1.0
13	Nitrate as NO_3	mg/l	IS: 3025 (Part-34): 1988 Reaffirmed: 2019	BDL	1.0 - 70	45	No Relaxation
14	Phenolic Compound (as C_6H_5OH)	mg/l	APHA 24th Ed. 2023 - 5530 C	BDL	0.001-0.005	0.001	0.002
15	Sulphate as SO_4	mg/l	APHA 24th Ed. 2023 - 4500- SO_4^{2-}	32.16	1.0 - 500	200	400
16	Alkalinity as $CaCO_3$	mg/l	APHA 24th Ed. 2023 - 2320 B	300.0	2.0 - 1000	200	600
17	Total Hardness as $CaCO_3$	mg/l	APHA 24th Ed. 2023 - 2340 C	268.0	5.0 - 800	200	600
18	Aluminium as Al	mg/l	APHA 24th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.015 - 5.0	0.03	0.2
19	Boron as B	mg/l	APHA 24th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.05 - 2.0	0.5	1.0
20	Copper as Cu	mg/l	APHA 24th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.03 - 10	0.05	1.5
21	Iron as Fe	mg/l	APHA 24th Ed. 2023 - 3120 B (ICP-OES)	0.10	0.05 - 20	0.3	No Relaxation

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22	**Manganese as Mn**	mg/l	APHA 24th Ed. 2023 - 3120 B (ICP-OES)	**0.04**	0.02 - 5.0	0.1	0.3
23	**Zinc as Zn**	mg/l	APHA 24th Ed. 2023 - 3120 B (ICP-OES)	**0.52**	0.05 - 15	5	15
24	**Cadmium as Cd**	mg/l	APHA 24th Ed. 2023 - 3120 B (ICP-OES)	**BDL**	0.05 - 2.0	0.003	No Relaxation
25	**Lead as Pb**	mg/l	APHA 24th Ed. 2023 - 3120 B (ICP-OES)	**BDL**	0.01 - 10	0.01	No Relaxation
26	**Mercury as Hg**	µg/l	APHA 24th Ed. 2023 - 3112 B	**BDL**	0.5 - 1000	1.0	No Relaxation
27	**Nickel as Ni**	mg/l	APHA 24th Ed. 2023 - 3120 B (ICP-OES)	**BDL**	0.05 - 5.0	0.02	No Relaxation
28	**Arsenic as As**	mg/l	APHA 24th Ed. 2023 - 3120 B (ICP-OES)	**BDL**	0.02 - 2.0	0.01	0.05
29	**Total Chromium**	mg/l	APHA 24th Ed. 2023 - 3120 B (ICP-OES)	**BDL**	0.03 - 5.0	0.05	No Relaxation
	Microbiological Parameters						
30	**E. coli**	MPN/ 100 ml	IS: 1622 - 1981 Reaffirmed: 2019	**Absent**	1.8 - 1600	Shall not be detected in any 100 ml sample	
31	**T. coli**	MPN/ 100 ml	IS: 1622 - 1981 Reaffirmed: 2019	**Absent**	1.8 - 1600	Shall not be detected in any 100 ml sample	

BDL=Below Detection Limit

..... END OF REPORT.....

- ETRC warrants that all analytical work is conducted professionally in accordance with all applicable standard laboratory practices and that this data reflects our best attempt to generate accurate results for the sample, mentioned in the report as above.
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Authorized Signatory
(Sandeep Kr Verma)
Lab-Incharge

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Authorized Signatory
(Ritu Garg)
QM

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PIEZOMETER NO.01

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ETRC/PM09/TEST-REP/FT/45

TEST REPORT
WATER & WASTE WATER ANALYSIS

Test Report Ref No. ETRC/EPA/9598/2023	**Date of Report:** 18.10.2023
Name /Address/Type of Industry	**M/s Dhampur Bio-organics Limited** **Unit: Asmoli, Division Sugar** **Village: Asmoli** **Tehsil: & District: Sambhal (U.P.) - 244304**

SAMPLE DETAILS

1	Water/ Waste Water	Ground Water	5	Packing Condition	Sealed
2	Sample Description	**Piezometer No. 01**	6	Sample Collected By	Industry Self
3	Sample received date	13.10.2023	7	Analysis Start Date	13.10.2023
4	Sample Quantity	5.0 liters	8	Analysis End Date	17.10.2023

TEST RESULT

Sr. No	Test Parameter	Unit	Protocol/Test Method	Result	Range of testing /limit of detection	Indian Standard 10500: 2012	
						Desirable	Permissible
	Physico-chemical Parameters						
1	Colour	Hazen	IS: 3025 (Part-4): 2021	<5.0	5 - 30	5	15
2	Odour	-	IS: 3025 (Part-5): 2018	Agreeable	Qualitative	Agreeable	Agreeable
3	pH	-	APHA 24th Ed. 2023 - 4500 H+	7.4	1 - 14	6.5-8.5	No Relaxation
4	Turbidity	NTU	APHA 24th Ed. 2023 - 2130 B	BDL	2 - 40	1	5
5	Total Dissolved Solids (TDS)	mg/l	IS: 3025 (Part-16): 2023	386.6	10 - 5000	500	2000
6	Ammonia (as total ammonia-N)	mg/l	APHA 24th Ed. 2023 - 4500-NH_3 F	BDL	0.5 - 2.0	0.5	No Relaxation
7	Anionic Detergents (as MBAS)	mg/l	APHA 24th Ed. 2023 - 5540 C	BDL	0.05 - 0.5	0.2	1.0
8	Calcium as Ca	mg/l	IS: 3025 (Part-40): 1991 Reaffirmed: 2019	57.6	2.0 - 600	75	200
9	Magnesium as Mg	mg/l	APHA 24th Ed. 2023 - 3500 Mg, B	31.10	0.1 - 400	30	100
10	Chloride as Cl	mg/l	APHA 24th Ed. 2023 - 4500-Cl⁻ B	30.0	2.0 - 2000	250	1000
11	Fluoride as F	mg/l	APHA 24th Ed. 2023 - 4500 F⁻ C	0.35	0.02 - 5.0	1.0	1.5
12	Free Residual Chlorine	mg/l	IS: 3025 (Part-26): 1986 Reaffirmed: 2019	BDL	0.1 - 5.0	0.2	1.0
13	Nitrate as NO_3	mg/l	IS: 3025 (Part-34): 1988 Reaffirmed: 2019	BDL	1.0 - 70	45	No Relaxation
14	Phenolic Compound (as C_6H_5OH)	mg/l	APHA 24th Ed. 2023 - 5530 C	BDL	0.001-0.005	0.001	0.002
15	Sulphate as SO_4	mg/l	APHA 24th Ed. 2023 - 4500- SO_4^{2-}	30.0	1.0 - 500	200	400
16	Alkalinity as $CaCO_3$	mg/l	APHA 24th Ed. 2023 - 2320 B	296.0	2.0 - 1000	200	600
17	Total Hardness as $CaCO_3$	mg/l	APHA 24th Ed. 2023 - 2340 C	272.0	5.0 - 600	200	600
18	Aluminium as Al	mg/l	APHA 24th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.015 - 5.0	0.03	0.2
19	Boron as B	mg/l	APHA 24th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.05 - 2.0	0.5	1.0
20	Copper as Cu	mg/l	APHA 24th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.03 - 10	0.05	1.5
21	Iron as Fe	mg/l	APHA 24th Ed. 2023 - 3120 B (ICP-OES)	0.12	0.05 - 20	0.3	No Relaxation

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Test Report Ref No. ETRC/EPA/9598/2023

22	**Manganese as Mn**	mg/l	APHA 24th Ed. 2023 - 3120 B (ICP-OES)	**0.03**	0.02 - 5.0	0.1	0.3
23	**Zinc as Zn**	mg/l	APHA 24th Ed. 2023 - 3120 B (ICP-OES)	**0.45**	0.05 - 15	5	15
24	**Cadmium as Cd**	mg/l	APHA 24th Ed. 2023 - 3120 B (ICP-OES)	**BDL**	0.05 - 2.0	0.003	No Relaxation
25	**Lead as Pb**	mg/l	APHA 24th Ed. 2023 - 3120 B (ICP-OES)	**BDL**	0.01 - 10	0.01	No Relaxation
26	**Mercury as Hg**	µg/l	APHA 24th Ed. 2023 - 3112 B	**BDL**	0.5 - 1000	1.0	No Relaxation
27	**Nickel as Ni**	mg/l	APHA 24th Ed. 2023 - 3120 B (ICP-OES)	**BDL**	0.05 - 5.0	0.02	No Relaxation
28	**Arsenic as As**	mg/l	APHA 24th Ed. 2023 - 3120 B (ICP-OES)	**BDL**	0.02 - 2.0	0.01	0.05
29	**Total Chromium**	mg/l	APHA 24th Ed. 2023 - 3120 B (ICP-OES)	**BDL**	0.03 - 5.0	0.05	No Relaxation
			Microbiological Parameters				
30	**E. coli**	MPN/ 100 ml	IS: 1622 - 1981 Reaffirmed: 2019	**Absent**	1.8 - 1600	Shall not be detected in any 100 ml sample	
31	**T. coli**	MPN/ 100 ml	IS: 1622 - 1981 Reaffirmed: 2019	**Absent**	1.8 - 1600	Shall not be detected in any 100 ml sample	

BDL=Below Detection Limit

..... END OF REPORT.....

- ETRC warrants that all analytical work is conducted professionally in accordance with all applicable standard laboratory practices and that this data reflects our best attempt to generate accurate results for the sample, mentioned in the report as above.
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Authorized Signatory
(Sandeep Kr Verma)
Lab-Incharge

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Authorized Signatory
(Ritu Garg)
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PIEZOMETER NO.02

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ETRC/PM09/TEST-REP/FT/45

TEST REPORT
WATER & WASTE WATER ANALYSIS

Test Report Ref No. ETRC/EPA/9599/2023	**Date of Report:** 18.10.2023
Name /Address/Type of Industry	**M/s Dhampur Bio-organics Limited** **Unit: Asmoli, Division Sugar** **Village: Asmoli** **Tehsil: & District: Sambhal (U.P.) - 244304**

SAMPLE DETAILS

1	Water/ Waste Water	Ground Water	5	Packing Condition	Sealed
2	Sample Description	**Piezometer No. 02**	6	Sample Collected By	Industry Self
3	Sample received date	13.10.2023	7	Analysis Start Date	13.10.2023
4	Sample Quantity	5.0 liters	8	Analysis End Date	17.10.2023

TEST RESULT

Sr. No	Test Parameter	Unit	Protocol/Test Method	Result	Range of testing /limit of detection	Indian Standard 10500: 2012	
						Desirable	Permissible
	Physico-chemical Parameters						
1	Colour	Hazen	IS: 3025 (Part-4): 2021	<5.0	5 - 30	5	15
2	Odour	-	IS: 3025 (Part-5): 2018	Agreeable	Qualitative	Agreeable	Agreeable
3	pH	-	APHA 24th Ed. 2023 - 4500 H^+	7.4	1 - 14	6.5-8.5	No Relaxation
4	Turbidity	NTU	APHA 24th Ed. 2023 - 2130 B	BDL	2 - 40	1	5
5	Total Dissolved Solids (TDS)	mg/l	IS: 3025 (Part-16): 2023	410.0	10 - 5000	500	2000
6	Ammonia (as total ammonia-N)	mg/l	APHA 24th Ed. 2023 - 4500-NH_3 F	BDL	0.5 - 2.0	0.5	No Relaxation
7	Anionic Detergents (as MBAS)	mg/l	APHA 24th Ed. 2023 - 5540 C	BDL	0.05 - 0.5	0.2	1.0
8	Calcium as Ca	mg/l	IS: 3025 (Part-40): 1991 Reaffirmed: 2019	52.8	2.0 - 600	75	200
9	Magnesium as Mg	mg/l	APHA 24th Ed. 2023 - 3500 Mg, B	31.10	0.1 - 400	30	100
10	Chloride as Cl	mg/l	APHA 24th Ed. 2023 - 4500-Cl B	34.0	2.0 - 2000	250	1000
11	Fluoride as F	mg/l	APHA 24th Ed. 2023 - 4500 F C	0.39	0.02 - 5.0	1.0	1.5
12	Free Residual Chlorine	mg/l	IS: 3025 (Part-26): 1986 Reaffirmed: 2019	BDL	0.1 - 5.0	0.2	1.0
13	Nitrate as NO_3	mg/l	IS: 3025 (Part-34): 1986 Reaffirmed: 2019	BDL	1.0 - 70	45	No Relaxation
14	Phenolic Compound (as C_6H_5OH)	mg/l	APHA 24th Ed. 2023 - 5530 C	BDL	0.001-0.005	0.001	0.002
15	Sulphate as SO_4	mg/l	APHA 24th Ed. 2023 - 4500- SO_4^{2-}	32.8	1.0 - 500	200	400
16	Alkalinity as $CaCO_3$	mg/l	APHA 24th Ed. 2023 - 2320 B	206.0	2.0 - 1000	200	600
17	Total Hardness as $CaCO_3$	mg/l	APHA 24th Ed. 2023 - 2340 C	260.0	5.0 - 800	200	600
18	Aluminium as Al	mg/l	APHA 24th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.015 - 5.0	0.03	0.2
19	Boron as B	mg/l	APHA 24th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.05 - 2.0	0.5	1.0
20	Copper as Cu	mg/l	APHA 24th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.03 - 10	0.05	1.5
21	Iron as Fe	mg/l	APHA 24th Ed. 2023 - 3120 B (ICP-OES)	0.11	0.05 - 20	0.3	No Relaxation

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Test Report Ref No. ETRC/EPA/9599/2023

22	**Manganese as Mn**	mg/l	APHA 24th Ed. 2023 - 3120 B (ICP-OES)	**0.02**	0.02 - 5.0	0.1	0.3
23	**Zinc as Zn**	mg/l	APHA 24th Ed. 2023 - 3120 B (ICP-OES)	**0.68**	0.05 - 15	5	15
24	**Cadmium as Cd**	mg/l	APHA 24th Ed. 2023 - 3120 B (ICP-OES)	**BDL**	0.05 - 2.0	0.003	No Relaxation
25	**Lead as Pb**	mg/l	APHA 24th Ed. 2023 - 3120 B (ICP-OES)	**BDL**	0.01 - 10	0.01	No Relaxation
26	**Mercury as Hg**	µg/l	APHA 24th Ed. 2023 - 3112 B	**BDL**	0.5 - 1000	1.0	No Relaxation
27	**Nickel as Ni**	mg/l	APHA 24th Ed. 2023 - 3120 B (ICP-OES)	**BDL**	0.05 - 5.0	0.02	No Relaxation
28	**Arsenic as As**	mg/l	APHA 24th Ed. 2023 - 3120 B (ICP-OES)	**BDL**	0.02 - 2.0	0.01	0.05
29	**Total Chromium**	mg/l	APHA 24th Ed. 2023 - 3120 B (ICP-OES)	**BDL**	0.03 - 5.0	0.05	No Relaxation
	Microbiological Parameters						
30	**E. coli**	MPN/ 100 ml	IS: 1622 - 1981 Reaffirmed: 2019	**Absent**	1.8 - 1600	Shall not be detected in any 100 ml sample	
31	**T. coli**	MPN/ 100 ml	IS: 1622 - 1981 Reaffirmed: 2019	**Absent**	1.8 - 1600	Shall not be detected in any 100 ml sample	

BDL=Below Detection Limit

..... END OF REPORT.....

- ETRC warrants that all analytical work is conducted professionally in accordance with all applicable standard laboratory practices and that this data reflects our best attempt to generate accurate results for the sample, mentioned in the report as above.
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Authorized Signatory
(Sandeep Kr Verma)
Lab-Incharge

Environmental and Technical Research Centre CHECKED

Authorized Signatory
(Ritu Garg)
QM

Page **2** of **2**

(PREMONSOON GROUND WATER TEST REPORT)
(MAY-2023)
TUBEWELL-1

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ETRCPM14/TES-REP/FT/17

TEST REPORT
WATER ANALYSIS

Test Report Ref No.: ETRC/1305/12232/2023	**Date of Report:** 13/05/2023
Name /Address/Type of Industry	**M/s Dhampur Bio-organics Limited** **Unit: Asmoli, Division Sugar** **Village: Asmoli** **Tehsil: & District: Sambhal (U.P.) - 244304**

SAMPLE DETAILS

1	Water/ Waste Water	Ground Water	5	Packing Condition	Sealed
2	Sample Description	**Borewell No. 01**	6	Sample Collected By	Industry Self
3	Sample received date	08.05.2023	7	Analysis Start Date	08.05.2023
4	Sample Quantity	5.0 liters	8	Analysis End Date	12.05.2023

TEST RESULT

Sr. No	Test Parameter	Unit	Protocol/Test Method	Result	Range of testing /limit of detection	Indian Standard 10500: 2012	
						Desirable	Permissible
	Physico-chemical Parameters						
1	**Colour**	Hazen	IS: 3025 (Part-4): 1983 Reaffirmed: 2017	**<5.0**	5 - 30	5	15
2	**Odour**	-	IS: 3025 (Part-5): 1983 Reaffirmed: 2017	**Agreeable**	Qualitative	Agreeable	Agreeable
3	**pH**	-	APHA 23rd Ed. 2017-4500 H^+	**7.4**	1 - 14	6.5-8.5	No Relaxation
4	**Turbidity**	NTU	APHA 23rd Ed. 2017-2130 B	**BDL**	2 - 40	1	5
5	**Total Dissolved Solids (TDS)**	mg/l	IS: 3025 (Part-16): 1984 Reaffirmed: 2017	**396.4**	10 - 5000	500	2000
6	**Ammonia (as total ammonia-N)**	mg/l	APHA 23rd Ed. 2017-4500-NH_3 F	**BDL**	0.5 - 2.0	0.5	No Relaxation
7	**Anionic Detergents (as MBAS)**	mg/l	APHA 23rd Ed. 2017-5540 C	**BDL**	0.05 - 0.5	0.2	1.0
8	**Calcium as Ca**	mg/l	IS: 3025 (Part-40): 1991 Reaffirmed: 2019	**52.8**	2.0 - 600	75	200
9	**Magnesium as Mg**	mg/l	APHA 23rd Ed. 2017-3500 Mg. B	**32.076**	0.1 - 400	30	100
10	**Chloride as Cl**	mg/l	APHA 23rd Ed. 2017-4500-Cl B	**30.0**	2.0 - 2000	250	1000
11	**Fluoride as F**	mg/l	APHA 23rd Ed. 2017-4500 F C	**0.35**	0.02 - 5.0	1.0	1.5
12	**Free Residual Chlorine**	mg/l	IS: 3025 (Part-26): 1986 Reaffirmed: 2019	**BDL**	0.1 - 5.0	0.2	1.0
13	**Nitrate as NO_3**	mg/l	IS: 3025 (Part-34): 1988 Reaffirmed: 2019	**BDL**	1.0 - 70	45	No Relaxation
14	**Phenolic Compound (as C_6H_5OH)**	mg/l	APHA 23rd Ed. 2017-5530 C	**BDL**	0.001-0.005	0.001	0.002
15	**Sulphate as SO_4**	mg/l	APHA 23rd Ed. 2017-4500- SO_4^{2-}	**28.0**	1.0 - 500	200	400
16	**Alkalinity as $CaCO_3$**	mg/l	APHA 23rd Ed. 2017-2320 B	**292.0**	2.0 - 1000	200	600
17	**Total Hardness as $CaCO_3$**	mg/l	APHA 23rd Ed. 2017-2340 C	**264.0**	5.0 - 600	200	600
18	**Aluminium as Al**	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	**BDL**	0.015 - 5.0	0.03	0.2
19	**Boron as B**	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	**BDL**	0.05 - 2.0	0.5	1.0
20	**Copper as Cu**	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	**BDL**	0.03 - 10	0.05	1.5

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21	Iron as Fe	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	0.11	0.05 - 20	0.3	No Relaxation
22	Manganese as Mn	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	0.06	0.02 - 5.0	0.1	0.3
23	Zinc as Zn	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	0.45	0.05 - 15	5	15
24	Cadmium as Cd	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	BDL	0.05 - 2.0	0.003	No Relaxation
25	Lead as Pb	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	BDL	0.01 - 10	0.01	No Relaxation
26	Mercury as Hg	µg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	BDL	0.5 - 1000	1.0	No Relaxation
27	Nickel as Ni	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	BDL	0.05 - 5.0	0.02	No Relaxation
28	Arsenic as As	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	BDL	0.02 - 2.0	0.01	0.05
29	Total Chromium	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	BDL	0.03 - 5.0	0.05	No Relaxation
	Microbiological Parameters						
30	E. coli	MPN/ 100 ml	IS: 1622 - 1981 Reaffirmed: 2019	Absent	≥ 2 MPN Present or Absent per 100 ml	Shall not be detected in any 100 ml sample	
31	T. coli	MPN/ 100 ml	IS: 1622 - 1981 Reaffirmed: 2019	Absent	≥ 2 MPN Present or Absent per 100 ml	Shall not be detected in any 100 ml sample	

BDL=Below Detection Limit

..... END OF REPORT.....

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Authorized Signatory
(Sandeep Kr Verma)
Lab-Incharge

CHECKED

Authorized Signatory
(Ritu Garg)
QM

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TUBEWELL-2

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ETRCPM14/TES-REP/FT/17

TEST REPORT
WATER ANALYSIS

Test Report Ref No.: ETRC/1305/12233/2023	**Date of Report:** 13/05/2023
Name /Address/Type of Industry	**M/s Dhampur Bio-organics Limited** **Unit: Asmoli, Division Sugar** **Village: Asmoli** **Tehsil: & District: Sambhal (U.P.) - 244304**

SAMPLE DETAILS

1	Water/ Waste Water	Ground Water	5	Packing Condition	Sealed
2	Sample Description	**Borewell No. 02**	6	Sample Collected By	Industry Self
3	Sample received date	08.05.2023	7	Analysis Start Date	08.05.2023
4	Sample Quantity	5.0 liters	8	Analysis End Date	12.05.2023

TEST RESULT

Sr. No	Test Parameter	Unit	Protocol/Test Method	Result	Range of testing /limit of detection	Indian Standard 10500: 2012	
						Desirable	Permissible
	Physico-chemical Parameters						
1	**Colour**	Hazen	IS: 3025 (Part-4): 1983 Reaffirmed: 2017	**<5.0**	5 - 30	5	15
2	**Odour**	-	IS: 3025 (Part-5): 1983 Reaffirmed: 2017	**Agreeable**	Qualitative	Agreeable	Agreeable
3	**pH**	-	APHA 23rd Ed. 2017-4500 H^+	**7.5**	1 - 14	6.5-8.5	No Relaxation
4	**Turbidity**	NTU	APHA 23rd Ed. 2017-2130 B	**BDL**	2 - 40	1	5
5	**Total Dissolved Solids (TDS)**	mg/l	IS: 3025 (Part-16): 1984 Reaffirmed: 2017	**385.8**	10 - 5000	500	2000
6	**Ammonia (as total ammonia-N)**	mg/l	APHA 23rd Ed. 2017-4500-NH_3 F	**BDL**	0.5 - 2.0	0.5	No Relaxation
7	**Anionic Detergents (as MBAS)**	mg/l	APHA 23rd Ed. 2017-5540 C	**BDL**	0.05 - 0.5	0.2	1.0
8	**Calcium as Ca**	mg/l	IS: 3025 (Part-40): 1991 Reaffirmed: 2019	**60.8**	2.0 - 600	75	200
9	**Magnesium as Mg**	mg/l	APHA 23rd Ed. 2017-3500 Mg, B	**33.048**	0.1 - 400	30	100
10	**Chloride as Cl**	mg/l	APHA 23rd Ed. 2017-4500-Cl^- B	**59.0**	2.0 - 2000	250	1000
11	**Fluoride as F**	mg/l	APHA 23rd Ed. 2017-4500 F C	**0.38**	0.02 - 5.0	1.0	1.5
12	**Free Residual Chlorine**	mg/l	IS: 3025 (Part-26): 1986 Reaffirmed: 2019	**BDL**	0.1 - 5.0	0.2	1.0
13	**Nitrate as NO_3**	mg/l	IS: 3025 (Part-34): 1988 Reaffirmed: 2019	**BDL**	1.0 - 70	45	No Relaxation
14	**Phenolic Compound (as C_6H_5OH)**	mg/l	APHA 23rd Ed. 2017-5530 C	**BDL**	0.001-0.005	0.001	0.002
15	**Sulphate as SO_4**	mg/l	APHA 23rd Ed. 2017-4500- SO_4^{2-}	**30.0**	1.0 - 500	200	400
16	**Alkalinity as $CaCO_3$**	mg/l	APHA 23rd Ed. 2017-2320 B	**304.0**	2.0 - 1000	200	600
17	**Total Hardness as $CaCO_3$**	mg/l	APHA 23rd Ed. 2017-2340 C	**288.0**	5.0 - 600	200	600
18	**Aluminium as Al**	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	**BDL**	0.015 - 5.0	0.03	0.2
19	**Boron as B**	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	**BDL**	0.05 - 2.0	0.5	1.0
20	**Copper as Cu**	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	**BDL**	0.03 - 10	0.05	1.5

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Test Report Ref No.: ETRC/1305/12233/2023

21	Iron as Fe	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	0.10	0.05 - 20	0.3	No Relaxation
22	Manganese as Mn	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	0.05	0.02 - 5.0	0.1	0.3
23	Zinc as Zn	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	0.67	0.05 - 15	5	15
24	Cadmium as Cd	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	BDL	0.05 - 2.0	0.003	No Relaxation
25	Lead as Pb	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	BDL	0.01 - 10	0.01	No Relaxation
26	Mercury as Hg	µg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	BDL	0.5 - 1000	1.0	No Relaxation
27	Nickel as Ni	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	BDL	0.05 - 5.0	0.02	No Relaxation
28	Arsenic as As	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	BDL	0.02 - 2.0	0.01	0.05
29	Total Chromium	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	BDL	0.03 - 5.0	0.05	No Relaxation
			Microbiological Parameters				
30	E. coli	MPN/ 100 ml	IS: 1622 - 1981 Reaffirmed: 2019	Absent	≥ 2 MPN Present or Absent per 100 ml	Shall not be detected in any 100 ml sample	
31	T. coli	MPN/ 100 ml	IS: 1622 - 1981 Reaffirmed: 2019	Absent	≥ 2 MPN Present or Absent per 100 ml	Shall not be detected in any 100 ml sample	

BDL=Below Detection Limit

.....END OF REPORT.....

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(Sandeep Kr Verma)
Lab-Incharge

Authorized Signatory
(Ritu Garg)
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TUBEWELL-3

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ETRCPM14/TES-REP/FT/17

TEST REPORT
WATER ANALYSIS

Test Report Ref No.: ETRC/1305/12234/2023	**Date of Report:** 13/05/2023
Name /Address/Type of Industry	**M/s Dhampur Bio-organics Limited** **Unit: Asmoli, Division Sugar** **Village: Asmoli** **Tehsil: & District: Sambhal (U.P.) - 244304**

SAMPLE DETAILS

1	Water/ Waste Water	Ground Water	5	Packing Condition	Sealed
2	Sample Description	**Borewell No. 03**	6	Sample Collected By	Industry Self
3	Sample received date	08.05.2023	7	Analysis Start Date	08.05.2023
4	Sample Quantity	5.0 liters	8	Analysis End Date	12.05.2023

TEST RESULT

Sr. No	Test Parameter	Unit	Protocol/Test Method	Result	Range of testing /limit of detection	Indian Standard 10500: 2012	
						Desirable	Permissible
	Physico-chemical Parameters						
1	**Colour**	Hazen	IS: 3025 (Part-4): 1983 Reaffirmed: 2017	**<5.0**	5 - 30	5	15
2	**Odour**	-	IS: 3025 (Part-5): 1983 Reaffirmed: 2017	**Agreeable**	Qualitative	Agreeable	Agreeable
3	**pH**	-	APHA 23rd Ed. 2017-4500 H^+	**7.5**	1 - 14	6.5-8.5	No Relaxation
4	**Turbidity**	NTU	APHA 23rd Ed. 2017-2130 B	**BDL**	2 - 40	1	5
5	**Total Dissolved Solids (TDS)**	mg/l	IS: 3025 (Part-16): 1984 Reaffirmed: 2017	**384.5**	10 - 5000	500	2000
6	**Ammonia (as total ammonia-N)**	mg/l	APHA 23rd Ed. 2017-4500-NH_3 F	**BDL**	0.5 - 2.0	0.5	No Relaxation
7	**Anionic Detergents (as MBAS)**	mg/l	APHA 23rd Ed. 2017-5540 C	**BDL**	0.05 - 0.5	0.2	1.0
8	**Calcium as Ca**	mg/l	IS: 3025 (Part-40): 1991 Reaffirmed: 2019	**56.0**	2.0 - 600	75	200
9	**Magnesium as Mg**	mg/l	APHA 23rd Ed. 2017-3500 Mg, B	**30.13**	0.1 - 400	30	100
10	**Chloride as Cl**	mg/l	APHA 23rd Ed. 2017-4500-Cl B	**32.0**	2.0 - 2000	250	1000
11	**Fluoride as F**	mg/l	APHA 23rd Ed. 2017-4500 F C	**0.37**	0.02 - 5.0	1.0	1.5
12	**Free Residual Chlorine**	mg/l	IS: 3025 (Part-26): 1986 Reaffirmed: 2019	**BDL**	0.1 - 5.0	0.2	1.0
13	**Nitrate as NO_3**	mg/l	IS: 3025 (Part-34): 1988 Reaffirmed: 2019	**BDL**	1.0 - 70	45	No Relaxation
14	**Phenolic Compound (as C_6H_5OH)**	mg/l	APHA 23rd Ed. 2017-5530 C	**BDL**	0.001-0.005	0.001	0.002
15	**Sulphate as SO_4**	mg/l	APHA 23rd Ed. 2017-4500- SO_4^{2-}	**30.0**	1.0 - 500	200	400
16	**Alkalinity as $CaCO_3$**	mg/l	APHA 23rd Ed. 2017-2320 B	**288.0**	2.0 - 1000	200	600
17	**Total Hardness as $CaCO_3$**	mg/l	APHA 23rd Ed. 2017-2340 C	**264.0**	5.0 - 800	200	600
18	**Aluminium as Al**	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	**BDL**	0.015 - 5.0	0.03	0.2
19	**Boron as B**	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	**BDL**	0.05 - 2.0	0.5	1.0
20	**Copper as Cu**	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	**BDL**	0.03 - 10	0.05	1.5

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Test Report Ref No.: ETRC/1305/12234/2023

21	Iron as Fe	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	0.14	0.05 - 20	0.3	No Relaxation
22	Manganese as Mn	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	0.04	0.02 - 5.0	0.1	0.3
23	Zinc as Zn	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	0.52	0.05 - 15	5	15
24	Cadmium as Cd	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	BDL	0.05 - 2.0	0.003	No Relaxation
25	Lead as Pb	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	BDL	0.01 - 10	0.01	No Relaxation
26	Mercury as Hg	µg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	BDL	0.5 - 1000	1.0	No Relaxation
27	Nickel as Ni	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	BDL	0.05 - 5.0	0.02	No Relaxation
28	Arsenic as As	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	BDL	0.02 - 2.0	0.01	0.05
29	Total Chromium	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	BDL	0.03 - 5.0	0.05	No Relaxation
			Microbiological Parameters				
30	E. coli	MPN/ 100 ml	IS: 1622 - 1981 Reaffirmed: 2019	Absent	> 2 MPN Present or Absent per 100 ml	Shall not be detected in any 100 ml sample	
31	T. coli	MPN/ 100 ml	IS: 1622 - 1981 Reaffirmed: 2019	Absent	> 2 MPN Present or Absent per 100 ml	Shall not be detected in any 100 ml sample	

BDL=Below Detection Limit

.....END OF REPORT.....

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(Sandeep Kr Verma)
Lab-Incharge

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Authorized Signatory
(Ritu Garg)
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PIEZOMETER-01

ENVIRONMENTAL AND TECHNICAL RESEARCH CENTRE
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ETRCPM14/TES-REP/FT/17

TEST REPORT
WATER ANALYSIS

Test Report Ref No.: ETRC/1305/12230/2023	**Date of Report:** 13/05/2023
Name /Address/Type of Industry	**M/s Dhampur Bio-organics Limited** **Unit: Asmoli, Division Sugar** **Village: Asmoli** **Tehsil: & District: Sambhal (U.P.) - 244304**

SAMPLE DETAILS

1	Water/ Waste Water	Ground Water	5	Packing Condition	Sealed
2	Sample Description	**Piezometer No. 01**	6	Sample Collected By	Industry Self
3	Sample received date	08.05.2023	7	Analysis Start Date	08.05.2023
4	Sample Quantity	5.0 liters	8	Analysis End Date	12.05.2023

TEST RESULT

Sr. No	Test Parameter	Unit	Protocol/Test Method	Result	Range of testing /limit of detection	Indian Standard 10500: 2012	
						Desirable	Permissible
	Physico-chemical Parameters						
1	Colour	Hazen	IS: 3025 (Part-4): 1983 Reaffirmed: 2017	<5.0	5 - 30	5	15
2	Odour	-	IS: 3025 (Part-5): 1983 Reaffirmed: 2017	Agreeable	Qualitative	Agreeable	Agreeable
3	pH	-	APHA 23rd Ed. 2017-4500 H^+	7.4	1 - 14	6.5-8.5	No Relaxation
4	Turbidity	NTU	APHA 23rd Ed. 2017-2130 B	BDL	2 - 40	1	5
5	Total Dissolved Solids (TDS)	mg/l	IS: 3025 (Part-16): 1984 Reaffirmed: 2017	402.0	10 - 5000	500	2000
6	Ammonia (as total ammonia-N)	mg/l	APHA 23rd Ed. 2017-4500-NH_3 F	BDL	0.5 - 2.0	0.5	No Relaxation
7	Anionic Detergents (as MBAS)	mg/l	APHA 23rd Ed. 2017-5540 C	BDL	0.05 - 0.5	0.2	1.0
8	Calcium as Ca	mg/l	IS: 3025 (Part-40): 1991 Reaffirmed: 2019	57.6	2.0 - 600	75	200
9	Magnesium as Mg	mg/l	APHA 23rd Ed. 2017-3500 Mg. B	27.21	0.1 - 400	30	100
10	Chloride as Cl	mg/l	APHA 23rd Ed. 2017-4500-Cl B	24.0	2.0 - 2000	250	1000
11	Fluoride as F	mg/l	APHA 23rd Ed. 2017-4500 F C	0.36	0.02 - 5.0	1.0	1.5
12	Free Residual Chlorine	mg/l	IS: 3025 (Part-26): 1986 Reaffirmed: 2019	BDL	0.1 - 5.0	0.2	1.0
13	Nitrate as NO_3	mg/l	IS: 3025 (Part-34): 1988 Reaffirmed: 2019	BDL	1.0 - 70	45	No Relaxation
14	Phenolic Compound (as C_6H_5OH)	mg/l	APHA 23rd Ed. 2017-5530 C	BDL	0.001-0.005	0.001	0.002
15	Sulphate as SO_4	mg/l	APHA 23rd Ed. 2017-4500- SO_4^{2-}	28.0	1.0 - 500	200	400
16	Alkalinity as $CaCO_3$	mg/l	APHA 23rd Ed. 2017-2320 B	280.0	2.0 - 1000	200	600
17	Total Hardness as $CaCO_3$	mg/l	APHA 23rd Ed. 2017-2340 C	256.0	5.0 - 800	200	600
18	Aluminium as Al	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	BDL	0.015 - 5.0	0.03	0.2
19	Boron as B	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	BDL	0.05 - 2.0	0.5	1.0
20	Copper as Cu	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	BDL	0.03 - 10	0.05	1.5

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21	Iron as Fe	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	0.15	0.05 - 20	0.3	No Relaxation
22	Manganese as Mn	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	0.05	0.02 - 5.0	0.1	0.3
23	Zinc as Zn	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	0.59	0.05 - 15	5	15
24	Cadmium as Cd	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	BDL	0.05 - 2.0	0.003	No Relaxation
25	Lead as Pb	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	BDL	0.01 - 10	0.01	No Relaxation
26	Mercury as Hg	µg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	BDL	0.5 - 1000	1.0	No Relaxation
27	Nickel as Ni	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	BDL	0.05 - 5.0	0.02	No Relaxation
28	Arsenic as As	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	BDL	0.02 - 2.0	0.01	0.05
29	Total Chromium	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	BDL	0.03 - 5.0	0.05	No Relaxation
			Microbiological Parameters				
30	E. coli	MPN/ 100 ml	IS: 1622 - 1981 Reaffirmed: 2019	Absent	≥ 2 MPN Present or Absent per 100 ml	Shall not be detected in any 100 ml sample	
31	T. coli	MPN/ 100 ml	IS: 1622 - 1981 Reaffirmed: 2019	Absent	≥ 2 MPN Present or Absent per 100 ml	Shall not be detected in any 100 ml sample	

BDL=Below Detection Limit

.....END OF REPORT.....

- ETRC warrants that all analytical work is conducted professionally in accordance with all applicable standard laboratory practices and that this data reflects our best attempt to generate accurate results for the sample, mentioned in the report as above.
- This result relate only to the items tested.
- ETRC does not assume any liability for any claims or damages related to the quality of parameter analyzed in the results and/or the performance of the equipment constituting to the results.
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- Complain register is available in our laboratory.

Authorized Signatory
(Sandeep Kr Verma)
Lab-Incharge

CHECKED

Authorized Signatory
(Ritu Garg)
QM

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PIEZOMETER-02

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ETRCPM14/TES-REP/FT/17

TEST REPORT
WATER ANALYSIS

Test Report Ref No.: ETRC/1305/12231/2023	**Date of Report:** 13/05/2023
Name /Address/Type of Industry	**M/s Dhampur Bio-organics Limited** **Unit: Asmoli, Division Sugar** **Village: Asmoli** **Tehsil: & District: Sambhal (U.P.) - 244304**

SAMPLE DETAILS

1	Water/ Waste Water	Ground Water	5	Packing Condition	Sealed
2	Sample Description	**Piezometer No. 02**	6	Sample Collected By	Industry Self
3	Sample received date	08.05.2023	7	Analysis Start Date	08.05.2023
4	Sample Quantity	5.0 liters	8	Analysis End Date	12.05.2023

TEST RESULT

Sr. No	Test Parameter	Unit	Protocol/Test Method	Result	Range of testing /limit of detection	Indian Standard 10500: 2012	
						Desirable	Permissible
	Physico-chemical Parameters						
1	**Colour**	Hazen	IS: 3025 (Part-4): 1983 Reaffirmed: 2017	**<5.0**	5 - 30	5	15
2	**Odour**	-	IS: 3025 (Part-5): 1983 Reaffirmed: 2017	**Agreeable**	Qualitative	Agreeable	Agreeable
3	**pH**	-	APHA 23rd Ed. 2017-4500 H^+	**7.5**	1 - 14	6.5-8.5	No Relaxation
4	**Turbidity**	NTU	APHA 23rd Ed. 2017-2130 B	**BDL**	2 - 40	1	5
5	**Total Dissolved Solids (TDS)**	mg/l	IS: 3025 (Part-16): 1984 Reaffirmed: 2017	**418.6**	10 - 5000	500	2000
6	**Ammonia (as total ammonia-N)**	mg/l	APHA 23rd Ed. 2017-4500-NH_3 F	**BDL**	0.5 - 2.0	0.5	No Relaxation
7	**Anionic Detergents (as MBAS)**	mg/l	APHA 23rd Ed. 2017-5540 C	**BDL**	0.05 - 0.5	0.2	1.0
8	**Calcium as Ca**	mg/l	IS: 3025 (Part-40): 1991 Reaffirmed: 2019	**54.4**	2.0 - 600	75	200
9	**Magnesium as Mg**	mg/l	APHA 23rd Ed. 2017-3500 Mg, B	**31.10**	0.1 - 400	30	100
10	**Chloride as Cl**	mg/l	APHA 23rd Ed. 2017-4500-Cl^- B	**36.0**	2.0 - 2000	250	1000
11	**Fluoride as F**	mg/l	APHA 23rd Ed. 2017-4500 F^- C	**0.36**	0.02 - 5.0	1.0	1.5
12	**Free Residual Chlorine**	mg/l	IS: 3025 (Part-26): 1986 Reaffirmed: 2019	**BDL**	0.1 - 5.0	0.2	1.0
13	**Nitrate as NO_3**	mg/l	IS: 3025 (Part-34): 1986 Reaffirmed: 2019	**BDL**	1.0 - 70	45	No Relaxation
14	**Phenolic Compound (as C_6H_5OH)**	mg/l	APHA 23rd Ed. 2017-5530 C	**BDL**	0.001-0.005	0.001	0.002
15	**Sulphate as SO_4**	mg/l	APHA 23rd Ed. 2017-4500- SO_4^{2-}	**36.0**	1.0 - 500	200	400
16	**Alkalinity as $CaCO_3$**	mg/l	APHA 23rd Ed. 2017-2320 B	**284.0**	2.0 - 1000	200	600
17	**Total Hardness as $CaCO_3$**	mg/l	APHA 23rd Ed. 2017-2340 C	**284.0**	5.0 - 800	200	600
18	**Aluminium as Al**	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	**BDL**	0.015 - 5.0	0.03	0.2
19	**Boron as B**	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	**BDL**	0.05 - 2.0	0.5	1.0
20	**Copper as Cu**	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	**BDL**	0.03 - 10	0.05	1.5

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21	Iron as Fe	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	0.12	0.05 - 20	0.3	No Relaxation
22	Manganese as Mn	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	0.08	0.02 - 5.0	0.1	0.3
23	Zinc as Zn	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	0.57	0.05 - 15	5	15
24	Cadmium as Cd	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	BDL	0.05 - 2.0	0.003	No Relaxation
25	Lead as Pb	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	BDL	0.01 - 10	0.01	No Relaxation
26	Mercury as Hg	µg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	BDL	0.5 - 1000	1.0	No Relaxation
27	Nickel as Ni	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	BDL	0.05 - 5.0	0.02	No Relaxation
28	Arsenic as As	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	BDL	0.02 - 2.0	0.01	0.05
29	Total Chromium	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	BDL	0.03 - 5.0	0.05	No Relaxation
	Microbiological Parameters						
30	E. coli	MPN/ 100 ml	IS: 1622 - 1981 Reaffirmed: 2019	Absent	± 2 MPN Present or Absent per 100 ml	Shall not be detected in any 100 ml sample	
31	T. coli	MPN/ 100 ml	IS: 1622 - 1981 Reaffirmed: 2019	Absent	± 2 MPN Present or Absent per 100 ml	Shall not be detected in any 100 ml sample	

BDL=Below Detection Limit

..... END OF REPORT.....

- ETRC warrants that all analytical work is conducted professionally in accordance with all applicable standard laboratory practices and that this data reflects our best attempt to generate accurate results for the sample, mentioned in the report as above.
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Authorized Signatory
(Sandeep Kr Verma)
Lab-Incharge

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Authorized Signatory
(Ritu Garg)
QM

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(POSTMONSOON (2022) GROUND WATER TEST REPORT)
PIEZOMETER-01

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ETRCPM14/TES-REP/FT/17

TEST REPORT
WATER ANALYSIS

Test Report Ref No. ETRC/EPA/7539/2022	**Date of Report:** 26.12.2022
Name /Address/Type of Industry	**M/s Dhampur Bio-organics Limited** **Unit: Asmoli, Division Sugar** **Village: Asmoli** **Tehsil: & District: Sambhal (U.P.) - 244304**

SAMPLE DETAILS

1	Water/ Waste Water	Ground Water	5	Packing Condition	Sealed
2	Sample Description	**Piezometer No. 1**	6	Sample Collected By	ETRC, Lucknow
3	Sample received date	22.12.2022	7	Analysis Start Date	22.12.2022
4	Sample Quantity	5.0 liters	8	Analysis End Date	26.12.2022

TEST RESULT

Sr. No	Test Parameter	Unit	Protocol/Test Method	Result	Range of testing /limit of detection	Indian Standard 10500: 2012	
						Desirable	Permissible
	Physico-chemical Parameters						
1	Colour	Hazen	IS: 3025 (Part-4): 1983 Reaffirmed: 2017	<5.0	5 - 30	5	15
2	Odour	-	IS: 3025 (Part-5): 1983 Reaffirmed: 2017	Agreeable	Qualitative	Agreeable	Agreeable
3	pH	-	APHA 23rd Ed 2017-4500 H^+	7.5	1 - 14	6.5-8.5	No Relaxation
4	Turbidity	NTU	APHA 23rd Ed 2017-2130 B	BDL	2 - 40	1	5
5	Total Dissolved Solid (TDS)	mg/l	IS: 3025 (Part-16): 1984 Reaffirmed: 2017	314.0	10 - 5000	500	2000
6	Ammonia (as total ammonia-N)	mg/l	IS: 3025 (Part-34): 1988 Reaffirmed: 2019	BDL	0.5 - 100	0.5	No Relaxation
7	Anionic Detergents (as MBAS)	mg/l	APHA 23rd Ed 2017-5540 C	BDL	0.05 - 0.5	0.2	1.0
8	Calcium as Ca	mg/l	IS: 3025 (Part-40): 1991 Reaffirmed: 2019	56.11	2.0 - 600	75	200
9	Magnesium as Mg	mg/l	APHA 23rd Ed. 2017-3500 Mg, B	26.24	0.1 - 200	30	100
10	Chloride as Cl	mg/l	APHA 23rd Ed 2017-4500-Cl^- B	14.01	2.0 - 2000	250	1000
11	Fluoride as F	mg/l	APHA 23rd Ed 2017-4500 F^- C	0.21	0.02 - 5.0	1.0	1.5
12	Free Residual Chlorine	mg/l	IS: 3025 (Part-26): 1986 Reaffirmed: 2019	BDL	0.1 - 5	0.2	1.0
13	Phenolic Compound (as C_6H_5OH)	mg/l	APHA 23rd Ed. 2017-6530 C	BDL	0.001 - 0.005	0.001	0.002
14	Nitrate as NO_3	mg/l	IS: 3025 (Part-34): 1988 Reaffirmed: 2019	BDL	1.0 - 70	45	No Relaxation
15	Sulphate as SO_4	mg/l	APHA 23rd Ed. 2017-4500 SO_4^{2-} E	4.44	1.0 - 500	200	400
16	Alkalinity as $CaCO_3$	mg/l	APHA 23rd Ed. 2017-2320 B	316.0	2.0 - 1000	200	600
17	Total Hardness as $CaCO_3$	mg/l	APHA 23rd Ed. 2017-2340 C	248.0	5.0 - 600	200	600
18	Aluminium as Al	mg/l	APHA 23rd Ed 2017-3120 B (ICP-OES)	BDL	0.015 - 5.0	0.03	0.2
19	Boron as B	mg/l	APHA 23rd Ed 2017-3120 B (ICP-OES)	BDL	0.05 - 2.0	0.5	1.0
20	Copper as Cu	mg/l	APHA 23rd Ed 2017-3120 B (ICP-OES)	BDL	0.03 - 10	0.05	1.5
21	Iron as Fe	mg/l	APHA 23rd Ed 2017-3120 B (ICP-OES)	0.14	0.05 - 20	0.3	No Relaxation

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22	Manganese as Mn	mg/l	APHA 23rd Ed 2017-3120 B (ICP-OES)	BDL	0.02 - 5.0	0.1	0.3
23	Zinc as Zn	mg/l	APHA 23rd Ed 2017-3120 B (ICP-OES)	BDL	0.05 - 15	5	15
24	Cadmium as Cd	mg/l	APHA 23rd Ed 2017-3120 B (ICP-OES)	BDL	0.05 - 2.0	0.003	No Relaxation
25	Lead as Pb	mg/l	APHA 23rd Ed 2017-3120 B (ICP-OES)	BDL	0.01 - 10	0.01	No Relaxation
26	Mercury as Hg	µg/l	APHA 23rd Ed 2017-3120 B (ICP-OES)	BDL	0.5 - 1000	1.0	No Relaxation
27	Nickel as Ni	mg/l	APHA 23rd Ed 2017-3120 B (ICP-OES)	BDL	0.05 - 5.0	0.02	No Relaxation
28	Arsenic as As	mg/l	APHA 23rd Ed 2017-3120 B (ICP-OES)	BDL	0.02 - 2.0	0.01	0.05
29	Total Chromium as Cr	mg/l	APHA 23rd Ed 2017-3120 B (ICP-OES)	BDL	0.03 - 5.0	0.05	No Relaxation
	Microbiological Parameters						
30	E. coli	MPN/ 100 ml	IS: 1622:1981 Reaffirmed: 2019	Absent	≥ 2 MPN Present or Absent per 100 ml	Shall not be detected in any 100 ml sample	
31	T. coli	MPN/ 100 ml	IS: 1622:1981 Reaffirmed: 2019	Absent	≥ 2 MPN Present or Absent per 100 ml	Shall not be detected in any 100 ml sample	

BDL=Below Detection Limit

..... END OF REPORT.....

- ETRC warrants that all analytical work is conducted professionally in accordance with all applicable standard laboratory practices and that this data reflects our best attempt to generate accurate results for the sample, mentioned in the report as above.
- The result relate only to the items tested.
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- Complain register is available in our laboratory.

Authorized Signatory
(Sandeep Kr Verma)
Lab-Incharge

Authorized Signatory
(Ritu Garg)
QM

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PIEZOMETER-02

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ETRCPM14/TES-REP/FT/17

TEST REPORT
WATER ANALYSIS

Test Report Ref No. ETRC/EPA/7540/2022	**Date of Report:** 26.12.2022
Name /Address/Type of Industry	**M/s Dhampur Bio-organics Limited** **Unit: Asmoli, Division Sugar** **Village: Asmoli** **Tehsil: & District: Sambhal (U.P.) - 244304**

SAMPLE DETAILS

1	Water/ Waste Water	Ground Water	5	Packing Condition	Sealed
2	Sample Description	**Piezometer No. 2**	6	Sample Collected By	ETRC, Lucknow
3	Sample received date	22.12.2022	7	Analysis Start Date	22.12.2022
4	Sample Quantity	5.0 liters	8	Analysis End Date	26.12.2022

TEST RESULT

Sr. No	Test Parameter	Unit	Protocol/Test Method	Result	Range of testing /limit of detection	Indian Standard 10500: 2012	
						Desirable	Permissible
	Physico-chemical Parameters						
1	**Colour**	Hazen	IS: 3025 (Part-4): 1983 Reaffirmed: 2017	**<5.0**	5 - 30	5	15
2	**Odour**	-	IS: 3025 (Part-5): 1983 Reaffirmed: 2017	**Agreeable**	Qualitative	Agreeable	Agreeable
3	**pH**	-	APHA 23rd Ed 2017-4500 H^+	**7.6**	1 - 14	6.5-8.5	No Relaxation
4	**Turbidity**	NTU	APHA 23rd Ed 2017-2130 B	**BDL**	2 - 40	1	5
5	**Total Dissolved Solid (TDS)**	mg/l	IS: 3025 (Part-16): 1984 Reaffirmed: 2017	**372.0**	10 - 5000	500	2000
6	**Ammonia (as total ammonia-N)**	mg/l	IS: 3025 (Part-34): 1988 Reaffirmed: 2019	**BDL**	0.5 - 100	0.5	No Relaxation
7	**Anionic Detergents (as MBAS)**	mg/l	APHA 23rd Ed 2017-5540 C	**BDL**	0.05 - 0.5	0.2	1.0
8	**Calcium as Ca**	mg/l	IS: 3025 (Part-40): 1991 Reaffirmed: 2019	**52.90**	2.0 - 600	75	200
9	**Magnesium as Mg**	mg/l	APHA 23rd Ed. 2017-3500 Mg. B	**30.13**	0.1 - 200	30	100
10	**Chloride as Cl**	mg/l	APHA 23rd Ed 2017-4500-Cl^- B	**20.02**	2.0 - 2000	250	1000
11	**Fluoride as F**	mg/l	APHA 23rd Ed 2017-4500 F^- C	**0.19**	0.02 - 5.0	1.0	1.5
12	**Free Residual Chlorine**	mg/l	IS: 3025 (Part-26): 1986 Reaffirmed: 2019	**BDL**	0.1 - 5	0.2	1.0
13	**Phenolic Compound (as C_6H_5OH)**	mg/l	APHA 23rd Ed. 2017-5530 C	**BDL**	0.001 - 0.005	0.001	0.002
14	**Nitrate as NO_3**	mg/l	IS: 3025 (Part-34): 1988 Reaffirmed: 2019	**BDL**	1.0 - 70	45	No Relaxation
15	**Sulphate as SO_4**	mg/l	APHA 23rd Ed. 2017-4500 SO_4^{2-} E	**14.82**	1.0 - 500	200	400
16	**Alkalinity as $CaCO_3$**	mg/l	APHA 23rd Ed. 2017-2320 B	**320.0**	2.0 - 1000	200	600
17	**Total Hardness as $CaCO_3$**	mg/l	APHA 23rd Ed. 2017-2340 C	**256.0**	5.0 - 800	200	600
18	**Aluminium as Al**	mg/l	APHA 23rd Ed 2017-3120 B (ICP-OES)	**BDL**	0.015 - 5.0	0.03	0.2
19	**Boron as B**	mg/l	APHA 23rd Ed 2017-3120 B (ICP-OES)	**BDL**	0.05 - 2.0	0.5	1.0
20	**Copper as Cu**	mg/l	APHA 23rd Ed 2017-3120 B (ICP-OES)	**BDL**	0.03 - 10	0.05	1.5
21	**Iron as Fe**	mg/l	APHA 23rd Ed 2017-3120 B (ICP-OES)	**0.225**	0.05 - 20	0.3	No Relaxation

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Test Report Ref No. ETRC/EPA/7540/2022

22	**Manganese as Mn**	mg/l	APHA 23rd Ed 2017-3120 B (ICP-OES)	**BDL**	0.02 - 5.0	0.1	0.3
23	**Zinc as Zn**	mg/l	APHA 23rd Ed 2017-3120 B (ICP-OES)	**BDL**	0.05 - 15	5	15
24	**Cadmium as Cd**	mg/l	APHA 23rd Ed 2017-3120 B (ICP-OES)	**BDL**	0.05 - 2.0	0.003	No Relaxation
25	**Lead as Pb**	mg/l	APHA 23rd Ed 2017-3120 B (ICP-OES)	**BDL**	0.01 - 10	0.01	No Relaxation
26	**Mercury as Hg**	µg/l	APHA 23rd Ed 2017-3120 B (ICP-OES)	**BDL**	0.5 - 1000	1.0	No Relaxation
27	**Nickel as Ni**	mg/l	APHA 23rd Ed 2017-3120 B (ICP-OES)	**BDL**	0.05 - 5.0	0.02	No Relaxation
28	**Arsenic as As**	mg/l	APHA 23rd Ed 2017-3120 B (ICP-OES)	**BDL**	0.02 - 2.0	0.01	0.05
29	**Total Chromium as Cr**	mg/l	APHA 23rd Ed 2017-3120 B (ICP-OES)	**BDL**	0.03 - 5.0	0.05	No Relaxation
	Microbiological Parameters						
30	**E. coli**	MPN/ 100 ml	IS: 1622:1981 Reaffirmed: 2019	**Absent**	≥ 2 MPN Present or Absent per 100 ml	Shall not be detected in any 100 ml sample	
31	**T. coli**	MPN/ 100 ml	IS: 1622:1981 Reaffirmed: 2019	**Absent**	≥ 2 MPN Present or Absent per 100 ml	Shall not be detected in any 100 ml sample	

BDL=Below Detection Limit

.....END OF REPORT.....

- ETRC warrants that all analytical work is conducted professionally in accordance with all applicable standard laboratory practices and that this data reflects our best attempt to generate accurate results for the sample, mentioned in the report as above.
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- Complain register is available in our laboratory.

Authorized Signatory
(Sandeep Kr Verma)
Lab-Incharge

Authorized Signatory
(Ritu Garg)
QM

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(PREMONSOON (2022) GROUND WATER TEST REPORT) PIEZOMETER-01

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ETRCPM14/TES-REP/FT/17

TEST REPORT
WATER ANALYSIS

Test Report Ref No.: ETRC/2605/12228/2022	**Date of Report:** 26/05/2022
Name /Address/Type of Industry	**M/s Dhampur Bio-organics Limited** **Unit: Asmoli, Division Sugar** **Village: Asmoli** **Tehsil: & District: Sambhal (U.P.) - 244304**

SAMPLE DETAILS

1	Water/ Waste Water	Ground Water	5	Packing Condition	Sealed
2	Sample Description	**Piezometer No. 01**	6	Sample Collected By	Industry Self
3	Sample received date	21.05.2022	7	Analysis Start Date	21.05.2022
4	Sample Quantity	5.0 liters	8	Analysis End Date	25.05.2022

TEST RESULT

Sr. No	Test Parameter	Unit	Protocol/Test Method	Result	Range of testing /limit of detection	Indian Standard 10500: 2012	
						Desirable	Permissible
	Physico-chemical Parameters						
1	Colour	Hazen	IS: 3025 (Part-4): 1983 Reaffirmed: 2017	<5.0	5 - 30	5	15
2	Odour	-	IS: 3025 (Part-5): 1983 Reaffirmed: 2017	Agreeable	Qualitative	Agreeable	Agreeable
3	pH	-	APHA 23rd Ed. 2017-4500 H^+	7.4	1 - 14	6.5-8.5	No Relaxation
4	Turbidity	NTU	APHA 23rd Ed. 2017-2130 B	BDL	2 - 40	1	5
5	Total Dissolved Solids (TDS)	mg/l	IS: 3025 (Part-16): 1984 Reaffirmed: 2017	380.8	10 - 5000	500	2000
6	Ammonia (as total ammonia-N)	mg/l	APHA 23rd Ed. 2017-4500-NH_3 F	BDL	0.5 - 2.0	0.5	No Relaxation
7	Anionic Detergents (as MBAS)	mg/l	APHA 23rd Ed. 2017-5540 C	BDL	0.05 - 0.5	0.2	1.0
8	Calcium as Ca	mg/l	IS: 3025 (Part-40): 1991 Reaffirmed: 2019	59.2	2.0 - 600	75	200
9	Magnesium as Mg	mg/l	APHA 23rd Ed. 2017-3500 Mg, B	32.076	0.1 - 400	30	100
10	Chloride as Cl	mg/l	APHA 23rd Ed. 2017-4500-Cl^- B	28.0	2.0 - 2000	250	1000
11	Fluoride as F	mg/l	APHA 23rd Ed. 2017-4500 F C	0.37	0.02 - 5.0	1.0	1.5
12	Free Residual Chlorine	mg/l	IS: 3025 (Part-26): 1986 Reaffirmed: 2019	BDL	0.1 - 5.0	0.2	1.0
13	Nitrate as NO_3	mg/l	IS: 3025 (Part-34): 1988 Reaffirmed: 2019	BDL	1.0 - 70	45	No Relaxation
14	Phenolic Compound (as C_6H_5OH)	mg/l	APHA 23rd Ed. 2017-5530 C	BDL	0.001-0.005	0.001	0.002
15	Sulphate as SO_4	mg/l	APHA 23rd Ed. 2017-4500- SO_4^{2-}	32.0	1.0 - 500	200	400
16	Alkalinity as $CaCO_3$	mg/l	APHA 23rd Ed. 2017-2320 B	308.0	2.0 - 1000	200	600
17	Total Hardness as $CaCO_3$	mg/l	APHA 23rd Ed. 2017-2340 C	280.0	5.0 - 800	200	600
18	Aluminium as Al	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	BDL	0.015 - 5.0	0.03	0.2
19	Boron as B	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	BDL	0.05 - 2.0	0.5	1.0
20	Copper as Cu	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	BDL	0.03 - 10	0.05	1.5

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21	**Iron as Fe**	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	**0.09**	0.05 - 20	0.3	No Relaxation
22	**Manganese as Mn**	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	**0.04**	0.02 - 5.0	0.1	0.3
23	**Zinc as Zn**	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	**0.65**	0.05 - 15	5	15
24	**Cadmium as Cd**	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	**BDL**	0.05 - 2.0	0.003	No Relaxation
25	**Lead as Pb**	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	**BDL**	0.01 - 10	0.01	No Relaxation
26	**Mercury as Hg**	µg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	**BDL**	0.5 - 1000	1.0	No Relaxation
27	**Nickel as Ni**	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	**BDL**	0.05 - 5.0	0.02	No Relaxation
28	**Arsenic as As**	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	**BDL**	0.02 - 2.0	0.01	0.05
29	**Total Chromium**	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	**BDL**	0.03 - 5.0	0.05	No Relaxation
	Microbiological Parameters						
30	**E. coli**	MPN/ 100 ml	IS: 1622 - 1981 Reaffirmed: 2019	**Absent**	≥ 2 MPN Present or Absent per 100 ml	Shall not be detected in any 100 ml sample	
31	**T. coli**	MPN/ 100 ml	IS: 1622 - 1981 Reaffirmed: 2019	**Absent**	≥ 2 MPN Present or Absent per 100 ml	Shall not be detected in any 100 ml sample	

BDL=Below Detection Limit

..... END OF REPORT.....

- ETRC warrants that all analytical work is conducted professionally in accordance with all applicable standard laboratory practices and that this data reflects our best attempt to generate accurate results for the sample, mentioned in the report as above.
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Authorized Signatory
(Sandeep Kr Verma)
Lab-Incharge

Environmental & Technical Research Centre CHECKED

Authorized Signatory
(Ritu Garg)
QM

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PIEZOMETER-02

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ETRCPM14/TES-REP/FT/17

TEST REPORT
WATER ANALYSIS

Test Report Ref No.: ETRC/2605/12229/2022	**Date of Report:** 26/05/2022
Name /Address/Type of Industry	**M/s Dhampur Bio-organics Limited** **Unit: Asmoli, Division Sugar** **Village: Asmoli** **Tehsil: & District: Sambhal (U.P.) - 244304**

SAMPLE DETAILS

1	Water/ Waste Water	Ground Water	5	Packing Condition	Sealed
2	Sample Description	**Piezometer No. 02**	6	Sample Collected By	Industry Self
3	Sample received date	21.05.2022	7	Analysis Start Date	21.05.2022
4	Sample Quantity	5.0 liters	8	Analysis End Date	25.05.2022

TEST RESULT

Sr. No	Test Parameter	Unit	Protocol/Test Method	Result	Range of testing /limit of detection	Indian Standard 10500: 2012	
						Desirable	Permissible
	Physico-chemical Parameters						
1	**Colour**	Hazen	IS: 3025 (Part-4): 1983 Reaffirmed: 2017	**<5.0**	5 - 30	5	15
2	**Odour**	-	IS: 3025 (Part-5): 1983 Reaffirmed: 2017	**Agreeable**	Qualitative	Agreeable	Agreeable
3	**pH**	-	APHA 23rd Ed. 2017-4500 H^+	**7.5**	1 - 14	6.5-8.5	No Relaxation
4	**Turbidity**	NTU	APHA 23rd Ed. 2017-2130 B	**BDL**	2 - 40	1	5
5	**Total Dissolved Solids (TDS)**	mg/l	IS: 3025 (Part-16): 1984 Reaffirmed: 2017	**410.6**	10 - 5000	500	2000
6	**Ammonia (as total ammonia-N)**	mg/l	APHA 23rd Ed. 2017-4500-NH_3 F	**BDL**	0.5 - 2.0	0.5	No Relaxation
7	**Anionic Detergents (as MBAS)**	mg/l	APHA 23rd Ed. 2017-5540 C	**BDL**	0.05 - 0.5	0.2	1.0
8	**Calcium as Ca**	mg/l	IS: 3025 (Part-40): 1991 Reaffirmed: 2019	**57.6**	2.0 - 600	75	200
9	**Magnesium as Mg**	mg/l	APHA 23rd Ed. 2017-3500 Mg, B	**30.13**	0.1 - 400	30	100
10	**Chloride as Cl**	mg/l	APHA 23rd Ed. 2017-4500-Cl^- B	**28.0**	2.0 - 2000	250	1000
11	**Fluoride as F**	mg/l	APHA 23rd Ed. 2017-4500 F^- C	**0.41**	0.02 - 5.0	1.0	1.5
12	**Free Residual Chlorine**	mg/l	IS: 3025 (Part-26): 1986 Reaffirmed: 2019	**BDL**	0.1 - 5.0	0.2	1.0
13	**Nitrate as NO_3**	mg/l	IS: 3025 (Part-34): 1986 Reaffirmed: 2019	**BDL**	1.0 - 70	45	No Relaxation
14	**Phenolic Compound (as C_6H_5OH)**	mg/l	APHA 23rd Ed. 2017-5530 C	**BDL**	0.001-0.005	0.001	0.002
15	**Sulphate as SO_4**	mg/l	APHA 23rd Ed. 2017-4500- SO_4^{2-}	**24.0**	1.0 - 500	200	400
16	**Alkalinity as $CaCO_3$**	mg/l	APHA 23rd Ed. 2017-2320 B	**282.0**	2.0 - 1000	200	600
17	**Total Hardness as $CaCO_3$**	mg/l	APHA 23rd Ed. 2017-2340 C	**268.0**	5.0 - 800	200	600
18	**Aluminium as Al**	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	**BDL**	0.015 - 5.0	0.03	0.2
19	**Boron as B**	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	**BDL**	0.05 - 2.0	0.5	1.0
20	**Copper as Cu**	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	**BDL**	0.03 - 10	0.05	1.5

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Test Report Ref No.: ETRC/2605/12229/2022

21	Iron as Fe	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	0.13	0.05 - 20	0.3	No Relaxation
22	Manganese as Mn	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	0.03	0.02 - 5.0	0.1	0.3
23	Zinc as Zn	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	0.72	0.05 - 15	5	15
24	Cadmium as Cd	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	BDL	0.05 - 2.0	0.003	No Relaxation
25	Lead as Pb	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	BDL	0.01 - 10	0.01	No Relaxation
26	Mercury as Hg	µg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	BDL	0.5 - 1000	1.0	No Relaxation
27	Nickel as Ni	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	BDL	0.05 - 5.0	0.02	No Relaxation
28	Arsenic as As	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	BDL	0.02 - 2.0	0.01	0.05
29	Total Chromium	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	BDL	0.03 - 5.0	0.05	No Relaxation
	Microbiological Parameters						
30	E. coli	MPN/ 100 ml	IS: 1622 - 1981 Reaffirmed: 2019	Absent	≥ 2 MPN Present or Absent per 100 ml	Shall not be detected in any 100 ml sample	
31	T. coli	MPN/ 100 ml	IS: 1622 - 1981 Reaffirmed: 2019	Absent	≥ 2 MPN Present or Absent per 100 ml	Shall not be detected in any 100 ml sample	

BDL=Below Detection Limit

..... END OF REPORT.....

- ETRC warrants that all analytical work is conducted professionally in accordance with all applicable standard laboratory practices and that the data reflects our best attempt to generate accurate results for the sample, mentioned in the report as above.
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(Sandeep Kr Verma)
Lab-Incharge

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(Ritu Garg)
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POST-MONSOON (2021) GROUND WATER TEST REPORT) PIEZOMETER-01

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ETRCPM14/TES-REP/FT/17

TEST REPORT
WATER ANALYSIS

Test Report Ref No.: ETRC/2210/12226/2021	**Date of Report:** 22/10/2021
Name /Address/Type of Industry	**M/s Dhampur Bio-organics Limited** **Unit: Asmoli, Division Sugar** **Village: Asmoli** **Tehsil: & District: Sambhal (U.P.) - 244304**

SAMPLE DETAILS

1	Water/ Waste Water	Ground Water	5	Packing Condition	Sealed
2	Sample Description	**Piezometer No. 01**	6	Sample Collected By	Industry Self
3	Sample received date	16.10.2021	7	Analysis Start Date	16.10.2021
4	Sample Quantity	5.0 liters	8	Analysis End Date	21.10.2021

TEST RESULT

Sr. No	Test Parameter	Unit	Protocol/Test Method	Result	Range of testing /limit of detection	Indian Standard 10500: 2012	
						Desirable	Permissible
	Physico-chemical Parameters						
1	**Colour**	Hazen	IS: 3025 (Part-4): 1983 Reaffirmed: 2017	**<5.0**	5 - 30	5	15
2	**Odour**	-	IS: 3025 (Part-5): 1983 Reaffirmed: 2017	**Agreeable**	Qualitative	Agreeable	Agreeable
3	**pH**	-	APHA 23rd Ed. 2017-4500 H^+	**7.5**	1 - 14	6.5-8.5	No Relaxation
4	**Turbidity**	NTU	APHA 23rd Ed. 2017-2130 B	**BDL**	2 - 40	1	5
5	**Total Dissolved Solids (TDS)**	mg/l	IS: 3025 (Part-16): 1984 Reaffirmed: 2017	**420.8**	10 - 5000	500	2000
6	**Ammonia (as total ammonia-N)**	mg/l	APHA 23rd Ed. 2017-4500-NH_3 F	**BDL**	0.5 - 2.0	0.5	No Relaxation
7	**Anionic Detergents (as MBAS)**	mg/l	APHA 23rd Ed. 2017-5540 C	**BDL**	0.05 - 0.5	0.2	1.0
8	**Calcium as Ca**	mg/l	IS: 3025 (Part-40): 1991 Reaffirmed: 2019	**52.8**	2.0 - 600	75	200
9	**Magnesium as Mg**	mg/l	APHA 23rd Ed. 2017-3500 Mg. B	**34.99**	0.1 - 400	30	100
10	**Chloride as Cl**	mg/l	APHA 23rd Ed. 2017-4500-Cl^- B	**30.0**	2.0 - 2000	250	1000
11	**Fluoride as F**	mg/l	APHA 23rd Ed. 2017-4500 F^- C	**0.38**	0.02 - 5.0	1.0	1.5
12	**Free Residual Chlorine**	mg/l	IS: 3025 (Part-26): 1986 Reaffirmed: 2019	**BDL**	0.1 - 5.0	0.2	1.0
13	**Nitrate as NO_3**	mg/l	IS: 3025 (Part-34): 1986 Reaffirmed: 2019	**BDL**	1.0 - 70	45	No Relaxation
14	**Phenolic Compound (as C_6H_5OH)**	mg/l	APHA 23rd Ed. 2017-5530 C	**BDL**	0.001-0.005	0.001	0.002
15	**Sulphate as SO_4**	mg/l	APHA 23rd Ed. 2017-4500- SO_4^{2-}	**34.18**	1.0 - 500	200	400
16	**Alkalinity as $CaCO_3$**	mg/l	APHA 23rd Ed. 2017-2320 B	**296.0**	2.0 - 1000	200	600
17	**Total Hardness as $CaCO_3$**	mg/l	APHA 23rd Ed. 2017-2340 C	**276.0**	5.0 - 600	200	600
18	**Aluminium as Al**	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	**BDL**	0.015 - 5.0	0.03	0.2
19	**Boron as B**	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	**BDL**	0.05 - 2.0	0.5	1.0
20	**Copper as Cu**	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	**BDL**	0.03 - 10	0.05	1.5

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Test Report Ref No.: ETRC/2210/12226/2021

21	**Iron as Fe**	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	**0.09**	0.05 - 20	0.3	No Relaxation
22	**Manganese as Mn**	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	**0.06**	0.02 - 5.0	0.1	0.3
23	**Zinc as Zn**	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	**0.59**	0.05 - 15	5	15
24	**Cadmium as Cd**	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	**BDL**	0.05 - 2.0	0.003	No Relaxation
25	**Lead as Pb**	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	**BDL**	0.01 - 10	0.01	No Relaxation
26	**Mercury as Hg**	µg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	**BDL**	0.5 - 1000	1.0	No Relaxation
27	**Nickel as Ni**	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	**BDL**	0.05 - 5.0	0.02	No Relaxation
28	**Arsenic as As**	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	**BDL**	0.02 - 2.0	0.01	0.05
29	**Total Chromium**	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	**BDL**	0.03 - 5.0	0.05	No Relaxation
	Microbiological Parameters						
30	**E. coli**	MPN/ 100 ml	IS: 1622 - 1981 Reaffirmed: 2019	**Absent**	≥ 2 MPN Present or Absent per 100 ml	Shall not be detected in any 100 ml sample	
31	**T. coli**	MPN/ 100 ml	IS: 1622 - 1981 Reaffirmed: 2019	**Absent**	≥ 2 MPN Present or Absent per 100 ml	Shall not be detected in any 100 ml sample	

BDL=Below Detection Limit

.....END OF REPORT.....

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Authorized Signatory
(Sandeep Kr Verma)
Lab-Incharge

Environmental and Technical Research Centre CHECKED

Authorized Signatory
(Ritu Garg)
QM

Page **2** of **2**

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PIEZOMETER-02

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ETRCPM14/TES-REP/FT/17

TEST REPORT
WATER ANALYSIS

Test Report Ref No.: ETRC/2210/12227/2021	**Date of Report:** 22/10/2021
Name /Address/Type of Industry	**M/s Dhampur Bio-organics Limited** **Unit: Asmoli, Division Sugar** **Village: Asmoli** **Tehsil: & District: Sambhal (U.P.) - 244304**

SAMPLE DETAILS

1	Water/ Waste Water	Ground Water	5	Packing Condition	Sealed
2	Sample Description	**Piezometer No. 02**	6	Sample Collected By	Industry Self
3	Sample received date	16.10.2021	7	Analysis Start Date	16.10.2021
4	Sample Quantity	5.0 liters	8	Analysis End Date	21.10.2021

TEST RESULT

Sr. No	Test Parameter	Unit	Protocol/Test Method	Result	Range of testing /limit of detection	Indian Standard 10500: 2012	
						Desirable	Permissible
	Physico-chemical Parameters						
1	Colour	Hazen	IS: 3025 (Part-4): 1983 Reaffirmed: 2017	<5.0	5 - 30	5	15
2	Odour	-	IS: 3025 (Part-5): 1983 Reaffirmed: 2017	Agreeable	Qualitative	Agreeable	Agreeable
3	pH	-	APHA 23rd Ed. 2017-4500 H^+	7.4	1 - 14	6.5-8.5	No Relaxation
4	Turbidity	NTU	APHA 23rd Ed. 2017-2130 B	BDL	2 - 40	1	5
5	Total Dissolved Solids (TDS)	mg/l	IS: 3025 (Part-16): 1984 Reaffirmed: 2017	392.4	10 - 5000	500	2000
6	Ammonia (as total ammonia-N)	mg/l	APHA 23rd Ed. 2017-4500-NH_3 F	BDL	0.5 - 2.0	0.5	No Relaxation
7	Anionic Detergents (as MBAS)	mg/l	APHA 23rd Ed. 2017-5540 C	BDL	0.05 - 0.5	0.2	1.0
8	Calcium as Ca	mg/l	IS: 3025 (Part-40): 1991 Reaffirmed: 2019	60.8	2.0 - 600	75	200
9	Magnesium as Mg	mg/l	APHA 23rd Ed. 2017-3500 Mg. B	30.13	0.1 - 400	30	100
10	Chloride as Cl	mg/l	APHA 23rd Ed. 2017-4500-Cl^- B	30.0	2.0 - 2000	250	1000
11	Fluoride as F	mg/l	APHA 23rd Ed. 2017-4500 F^- C	0.35	0.02 - 5.0	1.0	1.5
12	Free Residual Chlorine	mg/l	IS: 3025 (Part-26): 1986 Reaffirmed: 2019	BDL	0.1 - 5.0	0.2	1.0
13	Nitrate as NO_3	mg/l	IS: 3025 (Part-34): 1988 Reaffirmed: 2019	BDL	1.0 - 70	45	No Relaxation
14	Phenolic Compound (as C_6H_5OH)	mg/l	APHA 23rd Ed. 2017-5530 C	BDL	0.001-0.005	0.001	0.002
15	Sulphate as SO_4	mg/l	APHA 23rd Ed. 2017-4500- SO_4^{2-}	25.0	1.0 - 500	200	400
16	Alkalinity as $CaCO_3$	mg/l	APHA 23rd Ed. 2017-2320 B	300.0	2.0 - 1000	200	600
17	Total Hardness as $CaCO_3$	mg/l	APHA 23rd Ed. 2017-2340 C	276.0	5.0 - 800	200	600
18	Aluminium as Al	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	BDL	0.015 - 5.0	0.03	0.2
19	Boron as B	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	BDL	0.05 - 2.0	0.5	1.0
20	Copper as Cu	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	BDL	0.03 - 10	0.05	1.5

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Test Report Ref No.: ETRC/2210/12227/2021

21	**Iron as Fe**	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	**0.10**	0.05 - 20	0.3	No Relaxation
22	**Manganese as Mn**	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	**0.05**	0.02 - 5.0	0.1	0.3
23	**Zinc as Zn**	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	**0.40**	0.05 - 15	5	15
24	**Cadmium as Cd**	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	**BDL**	0.05 - 2.0	0.003	No Relaxation
25	**Lead as Pb**	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	**BDL**	0.01 - 10	0.01	No Relaxation
26	**Mercury as Hg**	µg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	**BDL**	0.5 - 1000	1.0	No Relaxation
27	**Nickel as Ni**	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	**BDL**	0.05 - 5.0	0.02	No Relaxation
28	**Arsenic as As**	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	**BDL**	0.02 - 2.0	0.01	0.05
29	**Total Chromium**	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	**BDL**	0.03 - 5.0	0.05	No Relaxation
	Microbiological Parameters						
30	**E. coli**	MPN/ 100 ml	IS: 1622 - 1981 Reaffirmed: 2019	**Absent**	≥ 2 MPN Present or Absent per 100 ml	Shall not be detected in any 100 ml sample	
31	**T. coli**	MPN/ 100 ml	IS: 1622 - 1981 Reaffirmed: 2019	**Absent**	≥ 2 MPN Present or Absent per 100 ml	Shall not be detected in any 100 ml sample	

BDL=Below Detection Limit

..... END OF REPORT.....

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Authorized Signatory
(Sandeep Kr Verma)
Lab-Incharge

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Authorized Signatory
(Ritu Garg)
QM

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PRE-MONSOON (2021) GROUND WATER TEST REPORT) PIEZOMETER-01

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ETRCPM14/TES-REP/FT/17

TEST REPORT
WATER ANALYSIS

Test Report Ref No.: ETRC/EPA/4490/2021	**Date of Report:** 28/05/2021
Name /Address/Type of Industry	**M/s DSM Sugar, Asmoli (A Unit of M/s Dhampur Sugar Mills Limited) Village: Asmoli, Tehsil: Sambhal District: Bheem Nagar (UP)**

SAMPLE DETAILS

1	Water/ Waste Water	Ground Water	5	Packing Condition	Sealed
2	Sample Description	**Piezometer No. 01**	6	Sample Collected By	Industry Self
3	Sample received date	22.05.2021	7	Analysis Start Date	22.05.2021
4	Sample Quantity	5.0 liters	8	Analysis End Date	27.05.2021

TEST RESULT

Sr. No	Test Parameter	Unit	Protocol/Test Method	Result	Range of testing /limit of detection	Indian Standard 10500: 2012	
						Desirable	Permissible
	Physico-chemical Parameters						
1	Colour	Hazen	IS: 3025 (Part-4): 1983 Reaffirmed: 2017	<5.0	5 - 30	5	15
2	Odour	-	IS: 3025 (Part-5): 1983 Reaffirmed: 2017	Agreeable	Qualitative	Agreeable	Agreeable
3	pH	-	APHA 23rd Ed. 2017-4500 H^+	7.5	1 - 14	6.5-8.5	No Relaxation
4	Turbidity	NTU	APHA 23rd Ed. 2017-2130 B	BDL	2 - 40	1	5
5	Total Dissolved Solids (TDS)	mg/l	IS: 3025 (Part-16): 1984 Reaffirmed: 2017	412.6	10 - 5000	500	2000
6	Ammonia (as total ammonia-N)	mg/l	APHA 23rd Ed. 2017-4500-NH_3 F	BDL	0.5 - 2.0	0.5	No Relaxation
7	Anionic Detergents (as MBAS)	mg/l	APHA 23rd Ed. 2017-5540 C	BDL	0.05 - 0.5	0.2	1.0
8	Calcium as Ca	mg/l	IS: 3025 (Part-40): 1991 Reaffirmed: 2019	59.2	2.0 - 600	75	200
9	Magnesium as Mg	mg/l	APHA 23rd Ed. 2017-3500 Mg. B	31.10	0.1 - 400	30	100
10	Chloride as Cl	mg/l	APHA 23rd Ed. 2017-4500-Cl^- B	36.0	2.0 - 2000	250	1000
11	Fluoride as F	mg/l	APHA 23rd Ed. 2017-4500 F^- C	0.40	0.02 - 5.0	1.0	1.5
12	Free Residual Chlorine	mg/l	IS: 3025 (Part-26): 1986 Reaffirmed: 2019	BDL	0.1 - 5.0	0.2	1.0
13	Nitrate as NO_3	mg/l	IS: 3025 (Part-34): 1988 Reaffirmed: 2019	BDL	1.0 - 70	45	No Relaxation
14	Phenolic Compound (as C_6H_5OH)	mg/l	APHA 23rd Ed. 2017-5530 C	BDL	0.001-0.005	0.001	0.002
15	Sulphate as SO_4	mg/l	APHA 23rd Ed. 2017-4500- SO_4^{2-}	30.46	1.0 - 500	200	400
16	Alkalinity as $CaCO_3$	mg/l	APHA 23rd Ed. 2017-2320 B	312.0	2.0 - 1000	200	600
17	Total Hardness as $CaCO_3$	mg/l	APHA 23rd Ed. 2017-2340 C	276.0	5.0 - 600	200	600
18	Aluminium as Al	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	BDL	0.015 - 5.0	0.03	0.2
19	Boron as B	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	BDL	0.05 - 2.0	0.5	1.0
20	Copper as Cu	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	BDL	0.03 - 10	0.05	1.5

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Test Report Ref No.: ETRC/EPA/4490/2021

21	Iron as Fe	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	0.10	0.05 - 20	0.3	No Relaxation
22	Manganese as Mn	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	0.03	0.02 - 5.0	0.1	0.3
23	Zinc as Zn	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	0.42	0.05 - 15	5	15
24	Cadmium as Cd	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	BDL	0.05 - 2.0	0.003	No Relaxation
25	Lead as Pb	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	BDL	0.01 - 10	0.01	No Relaxation
26	Mercury as Hg	µg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	BDL	0.5 - 1000	1.0	No Relaxation
27	Nickel as Ni	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	BDL	0.05 - 5.0	0.02	No Relaxation
28	Arsenic as As	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	BDL	0.02 - 2.0	0.01	0.05
29	Total Chromium	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	BDL	0.03 - 5.0	0.05	No Relaxation
	Microbiological Parameters						
30	E. coli	MPN/ 100 ml	IS: 1622 - 1981 Reaffirmed: 2019	Absent	≥ 2 MPN Present or Absent per 100 ml	Shall not be detected in any 100 ml sample	
31	T. coli	MPN/ 100 ml	IS: 1622 - 1981 Reaffirmed: 2019	Absent	≥ 2 MPN Present or Absent per 100 ml	Shall not be detected in any 100 ml sample	

BDL=Below Detection Limit

..... END OF REPORT.....

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(Sandeep Kr Verma)
Lab-Incharge

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Authorized Signatory
(Ritu Garg)
QM

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PIEZOMETER-02

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ETRCPM14/TES-REP/FT/17

TEST REPORT
WATER ANALYSIS

Test Report Ref No.: ETRC/EPA/4491/2021	**Date of Report:** 28/05/2021
Name /Address/Type of Industry	**M/s DSM Sugar, Asmoli** **(A Unit of M/s Dhampur Sugar Mills Limited)** **Village: Asmoli, Tehsil: Sambhal** **District: Bheem Nagar (UP)**

SAMPLE DETAILS

1	Water/ Waste Water	Ground Water	5	Packing Condition	Sealed
2	Sample Description	**Piezometer No. 02**	6	Sample Collected By	Industry Self
3	Sample received date	22.05.2021	7	Analysis Start Date	22.05.2021
4	Sample Quantity	5.0 liters	8	Analysis End Date	27.05.2021

TEST RESULT

Sr. No	Test Parameter	Unit	Protocol/Test Method	Result	Range of testing /limit of detection	Indian Standard 10500: 2012	
						Desirable	Permissible
	Physico-chemical Parameters						
1	**Colour**	Hazen	IS: 3025 (Part-4): 1983 Reaffirmed: 2017	**<5.0**	5 - 30	5	15
2	**Odour**	-	IS: 3025 (Part-5): 1983 Reaffirmed: 2017	**Agreeable**	Qualitative	Agreeable	Agreeable
3	**pH**	-	APHA 23rd Ed. 2017-4500 H^+	**7.5**	1 - 14	6.5-8.5	No Relaxation
4	**Turbidity**	NTU	APHA 23rd Ed. 2017-2130 B	**BDL**	2 - 40	1	5
5	**Total Dissolved Solids (TDS)**	mg/l	IS: 3025 (Part-16): 1984 Reaffirmed: 2017	**406.2**	10 - 5000	500	2000
6	**Ammonia (as total ammonia-N)**	mg/l	APHA 23rd Ed. 2017-4500-NH_3 F	**BDL**	0.5 - 2.0	0.5	No Relaxation
7	**Anionic Detergents (as MBAS)**	mg/l	APHA 23rd Ed. 2017-5540 C	**BDL**	0.05 - 0.5	0.2	1.0
8	**Calcium as Ca**	mg/l	IS: 3025 (Part-40): 1991 Reaffirmed: 2019	**56.0**	2.0 - 600	75	200
9	**Magnesium as Mg**	mg/l	APHA 23rd Ed. 2017-3500 Mg. B	**29.16**	0.1 - 400	30	100
10	**Chloride as Cl**	mg/l	APHA 23rd Ed. 2017-4500-Cl B	**26.0**	2.0 - 2000	250	1000
11	**Fluoride as F**	mg/l	APHA 23rd Ed. 2017-4500 F C	**0.34**	0.02 - 5.0	1.0	1.5
12	**Free Residual Chlorine**	mg/l	IS: 3025 (Part-26): 1986 Reaffirmed: 2019	**BDL**	0.1 - 5.0	0.2	1.0
13	**Nitrate as NO_3**	mg/l	IS: 3025 (Part-34): 1988 Reaffirmed: 2019	**BDL**	1.0 - 70	45	No Relaxation
14	**Phenolic Compound (as C_6H_5OH)**	mg/l	APHA 23rd Ed. 2017-5530 C	**BDL**	0.001-0.005	0.001	0.002
15	**Sulphate as SO_4**	mg/l	APHA 23rd Ed. 2017-4500- SO_4^{2-}	**26.0**	1.0 - 500	200	400
16	**Alkalinity as $CaCO_3$**	mg/l	APHA 23rd Ed. 2017-2320 B	**296.0**	2.0 - 1000	200	600
17	**Total Hardness as $CaCO_3$**	mg/l	APHA 23rd Ed. 2017-2340 C	**260.0**	5.0 - 800	200	600
18	**Aluminium as Al**	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	**BDL**	0.015 - 5.0	0.03	0.2
19	**Boron as B**	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	**BDL**	0.05 - 2.0	0.5	1.0
20	**Copper as Cu**	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	**BDL**	0.03 - 10	0.05	1.5

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21	Iron as Fe	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	0.13	0.05 - 20	0.3	No Relaxation
22	Manganese as Mn	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	0.02	0.02 - 5.0	0.1	0.3
23	Zinc as Zn	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	0.37	0.05 - 15	5	15
24	Cadmium as Cd	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	BDL	0.05 - 2.0	0.003	No Relaxation
25	Lead as Pb	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	BDL	0.01 - 10	0.01	No Relaxation
26	Mercury as Hg	µg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	BDL	0.5 - 1000	1.0	No Relaxation
27	Nickel as Ni	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	BDL	0.05 - 5.0	0.02	No Relaxation
28	Arsenic as As	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	BDL	0.02 - 2.0	0.01	0.05
29	Total Chromium	mg/l	APHA 23rd Ed. 2017-3120 B (ICP-OES)	BDL	0.03 - 5.0	0.05	No Relaxation
	Microbiological Parameters						
30	E. coli	MPN/ 100 ml	IS: 1622 - 1981 Reaffirmed: 2019	Absent	≥ 2 MPN Present or Absent per 100 ml	Shall not be detected in any 100 ml sample	
31	T. coli	MPN/ 100 ml	IS: 1622 - 1981 Reaffirmed: 2019	Absent	≥ 2 MPN Present or Absent per 100 ml	Shall not be detected in any 100 ml sample	

BDL=Below Detection Limit

..... END OF REPORT.....

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(Sandeep Kr Verma)
Lab-Incharge

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Authorized Signatory
(Ritu Garg)
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Photograph of Audit Team during Site Visit

Annexure 14 (Colly)

Dhampur Bio Organics Ltd. , Unit Meergan

Fly Ash Genration Records (MT)

Date	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	Remarks
1	0	28.8	29.4	26.6	27.5	
2	0	29.1	28.6	28	26	**Crushing season 2024-25 tart on dated 11 Nov 2024**
3	0	28.2	31.2	27.5	24.8	
4	0	28.4	28.1	26.9	19.0	
5	0	29.6	29.5	27.3	7.5	
6	0	29	28.8	28.4	0	
7	0	31.6	29.2	29	0	
8	0	30.8	28	28.7	0	
9	0	28.7	31.3	28.1	0	
10	0	31	30.2	26.8	0	
11	27.7	32.8	29	27.5	0	
12	28.3	29.1	29.8	28.7	0	
13	31.1	28.2	28.6	29	0	
14	29.8	29.6	29.3	29.8	0	
15	31.7	31.8	31.6	26.9	0	
16	34	31	32.5	27.8	0	
17	29.3	27.6	29.4	28.2	0	
18	31.7	28.3	27.9	27	0	
19	28.8	27.8	28.4	27.8	0	
20	29.5	28.5	30.6	26.2	0	
21	31.7	31.2	29	25.9	0	
22	32.8	29.8	28.7	26.8	0	
23	31.9	28.6	31.2	27.2	0	
24	29.7	31	28.8	26.5	0	**Crushing season 2024-25 Closed on dated 03 Mar 2025**
25	31.4	30.6	29.1	28	0	
26	29.9	29.4	27.8	28.4	0	
27	31.7	30.8	28.4	27.8	0	
28	33.5	31.7	29	27.2	0	
29	29.7	28.1	27.8	0	0	
30	31.2	30.3	28.6	0	0	
31	0	31	27.9	0	0	
Total	**15.4**	**922.4**	**90 .**	**4**	**104.8**	

ODN Number	Batch	Inv Date	Customer Name	City	Order Number	PO Number	Billing Doc. No.	Invoice Rate	Invoice Qty.	Assbl Value(Inv)	Mat Des(Inv)	Delivery Vehicle No.	Transporter Name(Delivery)	Total INV Value
TI1424101898		22-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033915	35.0000	267.050	9,346.75	Pressmud	UP16AQ8670	VERMA BIO & AGRO SERVICES	9,815.00
TI1424101891		21-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033908	35.0000	236.100	8,263.50	Pressmud	UP22AN1353	VERMA BIO & AGRO SERVICES	8,678.00
TI1424101887		21-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033904	35.0000	255.150	8,930.25	Pressmud	UP22AK5216	VERMA BIO & AGRO SERVICES	9,376.00
TI1424101899		22-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033916	35.0000	282.950	9,903.25	Pressmud	UP22AL1314	VERMA BIO & AGRO SERVICES	10,399.00
TI1424101900		22-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033917	35.0000	263.450	9,220.75	Pressmud	UP25BS8467	VERMA BIO & AGRO SERVICES	9,683.00
TI1424101906		22-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033923	35.0000	259.200	9,072.00	Pressmud	UP25DZ1592	VERMA BIO & AGRO SERVICES	9,526.00
TI1424101929		22-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033946	35.0000	288.300	10,090.50	Pressmud	UP25DU6517	VERMA BIO& AGRO SERVICES	10,595.00
TI1424101886		21-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033903	35.0000	238.050	8,331.75	Pressmud	UP21BU6380	VERMA BIO & AGRO SERVICES	8,748.00
TI1424101858		21-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033875	35.0000	217.800	7,623.00	Pressmud	UP22AN1353	VERMA BIO & AGRO SERVICES	8,005.00
TI1424101857		21-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033874	35.0000	276.850	9,689.75	Pressmud	UP22W7258	VERMA BIO & AGRO SERVICES	10,174.00
TI1424101856		21-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033873	35.0000	294.900	10,321.50	Pressmud	UP22S7026	VERMA BIO & AGRO SERVICES	10,838.00
TI1424101855		21-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033872	35.0000	275.500	9,642.50	Pressmud	UP22BD5425	VERMA BIO & AGRO SERVICES	10,125.00
TI1424101854		21-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033871	35.0000	295.750	10,351.25	Pressmud	UP22AR0605	VERMA BIO & AGRO SERVICES	10,869.00
TI1424101851		21-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033868	35.0000	331.300	11,595.50	Pressmud	UP25DU6517	VERMA BIO & AGRO SERVICES	12,176.00
TI1424101826		20-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033843	35.0000	248.950	8,713.25	Pressmud	UP25DZ1592	VERMA BIO & AGRO SERVICES	9,149.00
TI1424101935		23-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033952	35.0000	251.000	8,785.00	Pressmud	UP22BD5425	VERMA BIO & AGRO SERVICES	9,225.00
TI1424101936		23-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033953	35.0000	270.150	9,455.25	Pressmud	UP22S7026	VERMA BIO & AGRO SERVICES	9,927.00
TI1424101938		23-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033955	35.0000	261.750	9,161.25	Pressmud	UP22AR0605	VERMA BIO & AGRO SERVICES	9,619.00
TI1424101943		23-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033960	35.0000	251.150	8,790.25	Pressmud	UP22W7258	VERMA BIO & AGRO SERVICES	9,230.00
TI1424101949		23-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033966	35.0000	223.700	7,829.50	Pressmud	UP22AK5216	VERMA BIO & AGRO SERVICES	8,222.00
TI1424101970		23-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033987	35.0000	240.750	8,426.25	Pressmud	UP21BU6380	VERMA BIO & AGRO SERVICES	8,848.00
TI1424101971		23-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033988	35.0000	236.050	8,261.75	Pressmud	UP22AN1353	VERMA BIO & AGRO SERVICES	8,676.00
TI1424101980		24-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033997	35.0000	257.700	9,019.50	Pressmud	UP25DZ1592	VERMA BIO & AGRO SERVICES	9,472.00
TI1424101981		24-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033998	35.0000	252.900	8,851.50	Pressmud	UP16AQ8670	VERMA BIO & AGRO SERVICES	9,294.00
TI1424101982		24-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033999	35.0000	295.550	10,344.25	Pressmud	UP22AL1314	VERMA BIO & AGRO SERVICES	10,862.00
TI1424101984		24-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034001	35.0000	259.700	9,089.50	Pressmud	UP25BS8467	VERMA BIO & AGRO SERVICES	9,544.00
TI1424101985		24-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034002	35.0000	208.000	7,280.00	Pressmud	UP22AK5216	VERMA BIO & AGRO SERVICES	7,644.00
TI1424102014		24-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034031	35.0000	289.750	10,141.25	Pressmud	UP25DU6517	VERMA BIO & AGRO SERVICES	10,649.00
TI1424102019		25-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034036	35.0000	265.650	9,297.75	Pressmud	UP22S7026	VERMA BIO & AGRO SERVICES	9,762.00
TI1424102020		25-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034037	35.0000	259.150	9,070.25	Pressmud	UP22BD5425	VERMA BIO & AGRO SERVICES	9,524.00
TI1424101825		20-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033842	35.0000	270.700	9,474.50	Pressmud	UP22AL1314	VERMA BIO & AGRO SERVICES	9,949.00
TI1424101647		15-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033664	35.0000	278.700	9,754.50	Pressmud	UP22BD5425	VERMA BIO & AGRO SERVICES	10,243.00
TI1424101648		15-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033665	35.0000	233.050	8,156.75	Pressmud	UP21BU6380	VERMA BIO & AGRO SERVICES	8,565.00
TI1424101649		15-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033666	35.0000	262.750	9,196.25	Pressmud	UP22W7258	VERMA BIO & AGRO SERVICES	9,656.00
TI1424101651		15-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033668	35.0000	242.400	8,484.00	Pressmud	UP22AK5216	VERMA BIO & AGRO SERVICES	8,908.00
TI1424101672		15-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033689	35.0000	234.200	8,197.00	Pressmud	UP22AN1353	VERMA BIO & AGRO SERVICES	8,607.00
TI1424101677		16-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033694	35.0000	266.050	9,311.75	Pressmud	UP16AQ 8670	VERMA BIO & AGRO SERVICES	9,778.00
TI1424101678		16-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033695	35.0000	255.300	8,935.50	Pressmud	UP25DZ1592	VERMA BIO & AGRO SERVICES	9,382.00
TI1424101679		16-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033696	35.0000	284.450	9,955.75	Pressmud	UP25BS8467	VERMA BIO & AGRO SERVICES	10,454.00
TI1424101680		16-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033697	35.0000	293.250	10,263.75	Pressmud	UP22AL1314	VERMA BIO & AGRO SERVICES	10,778.00
TI1424101708		17-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033725	35.0000	271.500	9,502.50	Pressmud	UP22AR0605	VERMA BIO & AGRO SERVICES	9,979.00
TI1424101709		17-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033726	35.0000	261.500	9,152.50	Pressmud	UP22BD5425	VERMA BIO & AGRO SERVICES	9,611.00
TI1424101710		17-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033727	35.0000	267.800	9,373.00	Pressmud	UP22S7026	VERMA BIO & AGRO SERVICES	9,841.00
TI1424101711		17-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033728	35.0000	250.600	8,771.00	Pressmud	UP22W7258	VERMA BIO & AGRO SERVICES	9,209.00
TI1424101712		17-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033729	35.0000	219.750	7,691.25	Pressmud	UP21BU6380	VERMA BIO & AGRO SERVICES	8,075.00
TI1424101713		17-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033730	35.0000	239.000	8,365.00	Pressmud	UP22AK5216	VERMA BIO & AGRO SERVICES	8,783.00
TI1424101721		17-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033738	35.0000	285.950	10,008.25	Pressmud	UP25DU6517	VERMA BIO & AGRO SERVICES	10,508.00
TI1424101738		17-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033755	35.0000	213.000	7,455.00	Pressmud	UP22AN1353	VERMA BIO & AGRO SERVICES	7,827.00
TI1424101747		18-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033764	35.0000	250.200	8,757.00	Pressmud	UP25DZ1592	VERMA BIO & AGRO SERVICES	9,195.00
TI1424101748		18-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033765	35.0000	270.900	9,481.50	Pressmud	UP25BS8467	VERMA BIO & AGRO SERVICES	9,956.00
TI1424101749		18-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033766	35.0000	243.500	8,522.50	Pressmud	UP16AQ8670	VERMA BIO & AGRO SERVICES	8,949.00
TI1424101750		18-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033767	35.0000	281.450	9,850.75	Pressmud	UP22AL1314	VERMA BIO & AGRO SERVICES	10,343.00
TI1424101782		19-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033799	35.0000	273.100	9,558.50	Pressmud	UP22AR0605	VERMA BIO & AGRO SERVICES	10,037.00
TI1424101785		19-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033802	35.0000	260.050	9,101.75	Pressmud	UP22BD5425	VERMA BIO & AGRO SERVICES	9,558.00
TI1424101786		19-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033803	35.0000	272.500	9,537.50	Pressmud	UP22S7026	VERMA BIO & AGRO SERVICES	10,014.00
TI1424101787		19-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033804	35.0000	247.450	8,660.75	Pressmud	UP22W7258	VERMA BIO & AGRO SERVICES	9,095.00
TI1424101788		19-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033805	35.0000	231.650	8,107.75	Pressmud	UP22AK5216	VERMA BIO & AGRO SERVICES	8,514.00
TI1424101810		19-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033827	35.0000	222.550	7,789.25	Pressmud	UP21BU6380	VERMA BIO & AGRO SERVICES	8,179.00
TI1424101812		19-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033829	35.0000	231.500	8,102.50	Pressmud	UP22AN1353	VERMA BIO & AGRO SERVICES	8,509.00

TI1424101823		20-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033840	35.0000	256.450	8,975.75	Pressmud	UP16AQ8670	VERMA BIO & AGRO SERVICES	9,132.00
TI1424101824		20-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033841	35.0000	270.200	9,457.00	Pressmud	UP22AW3384	VERMA BIO & AGRO SERVICES	9,620.00
TI1424102221		30-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034238	35.0000	254.850	8,919.75	Pressmud	UP25DU6517	VERMA BIO & AGRO SERVICES	9,366.00
TI1424102234		30-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034251	35.0000	233.650	8,177.75	Pressmud	UP22AN1353	VERMA BIO & AGRO SERVICES	8,586.00
TI1424102240		31-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034257	35.0000	281.550	9,854.25	Pressmud	UP22S7026	VERMA BIO & AGRO SERVICES	10,346.00
TI1424102242		31-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034259	35.0000	265.800	9,303.00	Pressmud	UP22BD5425	VERMA BIO & AGRO SERVICES	9,769.00
TI1424102243		31-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034260	35.0000	282.250	9,878.75	Pressmud	UP22AR0605	VERMA BIO & AGRO SERVICES	10,373.00
TI1424102246		31-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034263	35.0000	256.900	8,991.50	Pressmud	UP16AQ8670	VERMA BIO & AGRO SERVICES	9,442.00
TI1424102248		31-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034265	35.0000	255.850	8,954.75	Pressmud	UP22W7258	VERMA BIO & AGRO SERVICES	9,403.00
TI1424102249		31-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034266	35.0000	241.150	8,440.25	Pressmud	UP25DZ1592	VERMA BIO & AGRO SERVICES	8,862.00
TI1424102250		31-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034267	35.0000	268.150	9,385.25	Pressmud	UP25DU6517	VERMA BIO & AGRO SERVICES	9,855.00
TI1424102275		31-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034289	35.0000	262.150	9,175.25	Pressmud	UP22BD5425	VERMA BIO & AGRO SERVICES	9,633.00
TI1424102280		31-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034294	35.0000	267.350	9,357.25	Pressmud	UP22AR0605	VERMA BIO & AGRO SERVICES	9,825.00
TI1424102281		01-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034295	35.0000	246.350	8,622.25	Pressmud	UP22W7258	VERMA BIO &AGRO SERVICES	9,054.00
TI1424102282		01-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034296	35.0000	223.600	7,826.00	Pressmud	UP22AN1353	VERMA BIO &AGRO SERVICES	8,218.00
TI1424102283		01-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034297	35.0000	252.950	8,853.25	Pressmud	UP16AQ8670	VERMA BIO &AGRO SERVICES	9,295.00
TI1424102284		01-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034298	35.0000	281.400	9,849.00	Pressmud	UP25BS8467	VERMA BIO &AGRO SERVICES	10,341.00
TI1424102309		02-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034323	35.0000	227.650	7,967.75	Pressmud	UP22AN1353	VERMA BIO & AGRO SERVICES	8,366.00
TI1424102310		02-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034324	35.0000	267.000	9,345.00	Pressmud	UP22BD5425	VERMA BIO & AGRO SERVICES	9,813.00
TI1424102311		02-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034325	35.0000	262.050	9,171.75	Pressmud	UP25DZ1592	VERMA BIO & AGRO SERVICES	9,630.00
TI1424102313		02-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034327	35.0000	272.900	9,551.50	Pressmud	UP22AR0605	VERMA BIO & AGRO SERVICES	10,030.00
TI1424102317		02-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034331	35.0000	298.950	10,463.25	Pressmud	UP25DU6517	VERMA BIO & AGRO SERVICES	10,987.00
TI1424102325		02-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034339	35.0000	214.950	7,523.25	Pressmud	UP22AN1353	VERMA BIO & AGRO SERVICES	7,899.00
TI1424102326		02-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034340	35.0000	266.950	9,343.25	Pressmud	UP25BS8467	VERMA BIO & AGRO SERVICES	9,811.00
TI1424102327		03-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034341	35.0000	256.600	8,981.00	Pressmud	UP16AQ8670	VERMA BIO & AGRO SERVICES	9,431.00
TI1424102328		03-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034342	35.0000	249.300	8,725.50	Pressmud	UP16AQ8670	VERMA BIO & AGRO SERVICES	9,162.00
TI1424102339		03-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034353	35.0000	221.300	7,745.50	Pressmud	UP22AN1353	VERMA BIO & AGRO SERVICES	8,134.00
TI1424102340		03-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034354	35.0000	250.800	8,778.00	Pressmud	UP25DU6517	VERMA BIO & AGRO SERVICES	9,216.00
TI1424102348		04-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034362	35.0000	240.400	8,414.00	Pressmud	UP22W7258	VERMA BIO & AGRO SERVICES	8,834.00
TI1424102349		04-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034363	35.0000	263.450	9,220.75	Pressmud	UP22AR0605	VERMA BIO & AGRO SERVICES	9,683.00
TI1424102350		04-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034364	35.0000	245.200	8,582.00	Pressmud	UP22BD5425	VERMA BIO & AGRO SERVICES	9,012.00
TI1424102363		04-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034377	35.0000	216.200	7,567.00	Pressmud	UP22AN1353	VERMA BIO & AGRO SERVICES	7,945.00
TI1424102220		30-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034237	35.0000	275.750	9,651.25	Pressmud	UP25BS8467	VERMA BIO & AGRO SERVICES	10,133.00
TI1424102024		25-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034041	35.0000	273.350	9,567.25	Pressmud	UP22AR0605	VERMA BIO & AGRO SERVICES	10,045.00
TI1424102026		25-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034043	35.0000	263.550	9,224.25	Pressmud	UP25DZ1592	VERMA BIO & AGRO SERVICES	9,686.00
TI1424102028		25-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034045	35.0000	223.950	7,838.25	Pressmud	UP22AK5216	VERMA BIO & AGRO SERVICES	8,230.00
TI1424102055		25-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034072	35.0000	217.100	7,598.50	Pressmud	UP21BU6380	VERMA BIO & AGRO SERVICES	7,979.00
TI1424102058		25-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034075	35.0000	219.350	7,677.25	Pressmud	UP22AN1353	VERMA BIO & AGRO SERVICES	8,061.00
TI1424102066		26-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034083	35.0000	286.900	10,041.50	Pressmud	UP22AL1314	VERMA BIO & AGRO SERVICES	10,544.00
TI1424102068		26-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034085	35.0000	280.100	9,803.50	Pressmud	UP25BS8467	VERMA BIO & AGRO SERVICES	10,294.00
TI1424102070		26-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034087	35.0000	266.100	9,313.50	Pressmud	UP22W7258	VERMA BIO & AGRO SERVICES	9,780.00
TI1424102073		26-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034090	35.0000	246.150	8,615.25	Pressmud	UP16AQ8670	VERMA BIO & AGRO SERVICES	9,045.00
TI1424102101		26-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034118	35.0000	264.800	9,268.00	Pressmud	UP22S7026	VERMA BIO & AGRO SERVICES	9,732.00
TI1424102103		27-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034120	35.0000	267.000	9,345.00	Pressmud	UP22AR0605	VERMA BIO & AGRO SERVICES	9,813.00
TI1424102104		27-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034121	35.0000	256.000	8,960.00	Pressmud	UP22BD5425	VERMA BIO & AGRO SERVICES	9,408.00
TI1424102110		27-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034127	35.0000	243.550	8,524.25	Pressmud	UP22W7258	VERMA BIO & AGRO SERVICES	8,950.00
TI1424102112		27-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034129	35.0000	233.300	8,165.50	Pressmud	UP22AK5216	VERMA BIO & AGRO SERVICES	8,574.00
TI1424102113		27-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034130	35.0000	248.850	8,709.75	Pressmud	UP25DU6517	VERMA BIO & AGRO SERVICES	9,146.00
TI1424102132		27-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034149	35.0000	229.050	8,016.75	Pressmud	UP21BU6380	VERMA BIO & AGRO SERVICES	8,417.00
TI1424102137		27-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034154	35.0000	226.050	7,911.75	Pressmud	UP22AN1353	VERMA BIO & AGRO SERVICES	8,308.00
TI1424102143		28-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034160	35.0000	246.600	8,631.00	Pressmud	UP16AQ8670	VERMA BIO & AGRO SERVICES	9,063.00
TI1424102144		28-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034161	35.0000	238.150	8,335.25	Pressmud	UP25DZ1592	VERMA BIO & AGRO SERVICES	8,751.00
TI1424102145		28-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034162	35.0000	259.150	9,070.25	Pressmud	UP22AL1314	VERMA BIO & AGRO SERVICES	9,524.00
TI1424102146		28-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034163	35.0000	220.900	7,731.50	Pressmud	UP25BS8467	VERMA BIO & AGRO SERVICES	8,118.00
TI1424102170		28-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034187	35.0000	216.900	7,591.50	Pressmud	UP22AN1353	VERMA BIO & AGRO SERVICES	7,972.00
TI1424102176		29-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034193	35.0000	250.850	8,779.75	Pressmud	UP22BD5425	VERMA BIO & AGRO SERVICES	9,220.00
TI1424102177		29-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034194	35.0000	263.350	9,217.25	Pressmud	UP22S7026	VERMA BIO & AGRO SERVICES	9,677.00
TI1424102178		29-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034195	35.0000	272.850	9,549.75	Pressmud	UP22AR0605	VERMA BIO & AGRO SERVICES	10,028.00
TI1424102181		29-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034198	35.0000	246.750	8,636.25	Pressmud	UP22W7258	VERMA BIO & AGRO SERVICES	9,068.00
TI1424102208		29-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034225	35.0000	244.400	8,554.00	Pressmud	UP22AN1353	VERMA BIO & AGRO SERVICES	8,982.00
TI1424102217		30-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034234	35.0000	268.350	9,392.25	Pressmud	UP25DZ1592	VERMA BIO & AGRO SERVICES	9,862.00

TI1424102218		30-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034235	35.0000	296.600	10,381.00	Pressmud	UP22AL1314	VERMA BIO & AGRO SERVICES	10,000.00
TI1424102219		30-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034236	35.0000	271.950	9,518.25	Pressmud	UP22W7258	VERMA BIO & AGRO SERVICES	9,170.00
TI1424101646		15-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033663	35.0000	289.900	10,146.50	Pressmud	UP22AR0605	VERMA BIO & AGRO SERVICES	10,655.00
TI1424101264		30-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033291	35.0000	212.000	7,420.00	Pressmud	UP21BU 6380	VERMA BIO & AGRO SERVICES	7,792.00
TI1424101265		30-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033292	35.0000	269.650	9,437.75	Pressmud	UP22W7258	VERMA BIO & AGRO SERVICES	9,910.00
TI1424101267		30-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033294	35.0000	275.350	9,637.25	Pressmud	UP22AL 1314	VERMA BIO & AGRO SERVICES	10,119.00
TI1424101287		31-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033314	35.0000	274.700	9,614.50	Pressmud	UP22S 7026	VERMA BIO & AGRO SERVICES	10,095.00
TI1424101288		31-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033315	35.0000	255.600	8,946.00	Pressmud	UP22BD 5425	VERMA BIO & AGRO SERVICES	9,394.00
TI1424101289		31-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033316	35.0000	226.200	7,917.00	Pressmud	UP22AN 1353	VERMA BIO & AGRO SERVICES	8,313.00
TI1424101290		31-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033317	35.0000	251.450	8,800.75	Pressmud	UP25DZ1592	VERMA BIO & AGRO SERVICES	9,241.00
TI1424101291		31-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033318	35.0000	275.850	9,654.75	Pressmud	UP25DU 6517	VERMA BIO & AGRO SERVICES	10,137.00
TI1424101292		31-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033319	35.0000	278.400	9,744.00	Pressmud	UP22AR 0605	VERMA BIO & AGRO SERVICES	10,232.00
TI1424101317		31-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033334	35.0000	203.450	7,120.75	Pressmud	UK07AF 8995	VERMA BIO & AGRO SERVICES	7,477.00
TI1424101318		31-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033335	35.0000	256.500	8,977.50	Pressmud	UP25BS 8467	VERMA BIO & AGRO SERVICES	9,426.00
TI1424101319		01-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033336	35.0000	245.750	8,601.25	Pressmud	UP22W 7258	VERMA BIO & AGRO SERVICES	9,031.00
TI1424101320		01-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033337	35.0000	246.650	8,632.75	Pressmud	UP25DZ 1592	VERMA BIO & AGRO SERVICES	9,065.00
TI1424101321		01-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033338	35.0000	231.200	8,092.00	Pressmud	UP22AK 5216	VERMA BIO & AGRO SERVICES	8,496.00
TI1424101322		01-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033339	35.0000	214.900	7,521.50	Pressmud	UP21BU 6380	VERMA BIO & AGRO SERVICES	7,898.00
TI1424101323		01-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033340	35.0000	252.600	8,841.00	Pressmud	UP16AQ 8670	VERMA BIO & AGRO SERVICES	9,283.00
TI1424101335		02-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033352	35.0000	220.750	7,726.25	Pressmud	UP22AN 1353	VERMA BIO & AGRO SERVICES	8,112.00
TI1424101336		02-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033353	35.0000	260.250	9,108.75	Pressmud	UP22BD 5425	VERMA BIO & AGRO SERVICES	9,565.00
TI1424101337		02-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033354	35.0000	282.050	9,871.75	Pressmud	UP22AL 1314	VERMA BIO & AGRO SERVICES	10,366.00
TI1424101338		02-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033355	35.0000	273.550	9,574.25	Pressmud	UP22S 7026	VERMA BIO & AGRO SERVICES	10,052.00
TI1424101339		02-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033356	35.0000	211.350	7,397.25	Pressmud	UK07AF 8995	VERMA BIO & AGRO SERVICES	7,767.00
TI1424101340		02-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033357	35.0000	276.600	9,681.00	Pressmud	UP22AR 0605	VERMA BIO & AGRO SERVICES	10,165.00
TI1424101357		02-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033374	35.0000	240.650	8,422.75	Pressmud	UP22W 7258	VERMA BIO & AGRO SERVICES	8,845.00
TI1424101358		03-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033375	35.0000	263.600	9,226.00	Pressmud	UP25DU 6517	VERMA BIO & AGRO SERVICES	9,688.00
TI1424101359		03-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033376	35.0000	259.550	9,084.25	Pressmud	UP25BS 8467	VERMA BIO & AGRO SERVICES	9,538.00
TI1424101360		03-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033377	35.0000	204.850	7,169.75	Pressmud	UP21BU 6380	VERMA BIO & AGRO SERVICES	7,528.00
TI1424101361		03-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033378	35.0000	222.800	7,798.00	Pressmud	UP22AK 5216	VERMA BIO & AGRO SERVICES	8,188.00
TI1424101362		03-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033379	35.0000	239.050	8,366.75	Pressmud	UP25DZ 1592	VERMA BIO& AGRO SERVICES	8,785.00
TI1424101374		03-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033391	35.0000	260.800	9,128.00	Pressmud	UP22AR 0605	VERMA BIO & AGRO SERVICES	9,584.00
TI1424101375		04-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033392	35.0000	252.950	8,853.25	Pressmud	UP22BD5425	VERMA BIO & AGRO SERVICES	9,295.00
TI1424101263		30-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033290	35.0000	247.700	8,669.50	Pressmud	UP16AQ 8670	VERMA BIO & AGRO SERVICES	9,104.00
TI1424101156		25-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033183	35.0000	265.750	9,301.25	Pressmud	UP22W 7258	VERMA BIO & AGRO SERVICES	9,767.00
TI1424101157		25-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033184	35.0000	267.050	9,346.75	Pressmud	UP25DZ 1592	VERMA BIO & AGRO SERVICES	9,815.00
TI1424101160		25-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033187	35.0000	211.800	7,413.00	Pressmud	UP22AN 1353	VERMA BIO & AGRO SERVICES	7,783.00
TI1424101174		25-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033201	35.0000	229.800	8,043.00	Pressmud	UP22AN 1353	VERMA BIO & AGRO SERVICES	8,445.00
TI1424101175		25-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033202	35.0000	277.550	9,714.25	Pressmud	UP25BS 8467	VERMA BIO & AGRO SERVICES	10,200.00
TI1424101176		26-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033203	35.0000	243.800	8,533.00	Pressmud	UP22AK 5216	VERMA BIO & AGRO SERVICES	8,959.00
TI1424101177		26-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033204	35.0000	278.400	9,744.00	Pressmud	UP22AL 1314	VERMA BIO & AGRO SERVICES	10,232.00
TI1424101178		26-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033205	35.0000	270.200	9,457.00	Pressmud	UP16AQ 8670	VERMA BIO & AGRO SERVICES	9,929.00
TI1424101179		26-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033206	35.0000	220.700	7,724.50	Pressmud	UP21BU 6380	VERMA BIO & AGRO SERVICES	8,111.00
TI1424101180		26-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033207	35.0000	277.400	9,709.00	Pressmud	UP25DU 6517	VERMA BIO & AGRO SERVICES	10,195.00
TI1424101195		26-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033222	35.0000	229.050	8,016.75	Pressmud	UP22AN 1353	VERMA BIO & AGRO SERVICES	8,417.00
TI1424101196		27-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033223	35.0000	267.500	9,362.50	Pressmud	UP22BD 5425	VERMA BIO & AGRO SERVICES	9,831.00
TI1424101197		27-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033224	35.0000	283.500	9,922.50	Pressmud	UP22S 7026	VERMA BIO & AGRO SERVICES	10,419.00
TI1424101198		27-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033225	35.0000	287.100	10,048.50	Pressmud	UP22AR 0605	VERMA BIO & AGRO SERVICES	10,551.00
TI1424101199		27-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033226	35.0000	214.100	7,493.50	Pressmud	UK07AF 8995	VERMA BIO & AGRO SERVICES	7,868.00
TI1424101200		27-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033227	35.0000	257.250	9,003.75	Pressmud	UP22W 7258	VERMA BIO & AGRO SERVICES	9,454.00
TI1424101220		27-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033247	35.0000	290.850	10,179.75	Pressmud	UP25BS 8467	VERMA BIO & AGRO SERVICES	10,690.00
TI1424101221		27-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033248	35.0000	228.650	8,002.75	Pressmud	UP21BU6380	VERMA BIO & AGRO SERVICES	8,403.00
TI1424101222		28-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033249	35.0000	238.000	8,330.00	Pressmud	UP22AK5216	VERMA BIO & AGRO SERVICES	8,746.00
TI1424101224		28-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033251	35.0000	256.750	8,986.25	Pressmud	UP16AQ 8670	VERMA BIO & AGRO SERVICES	9,436.00
TI1424101225		28-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033252	35.0000	276.750	9,686.25	Pressmud	UP22AL1314	VERMA BIO & AGRO SERVICES	10,170.00
TI1424101227		28-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033254	35.0000	262.100	9,173.50	Pressmud	UP25DZ 1592	VERMA BIO & AGRO SERVICES	9,632.00
TI1424101243		29-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033270	35.0000	258.550	9,049.25	Pressmud	UP22BD 5425	VERMA BIO & AGRO SERVICES	9,501.00
TI1424101244		29-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033271	35.0000	270.500	9,467.50	Pressmud	UP22S 7026	VERMA BIO & AGRO SERVICES	9,942.00
TI1424101245		29-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033272	35.0000	271.000	9,485.00	Pressmud	UP22AR 0605	VERMA BIO & AGRO SERVICES	9,959.00
TI1424101246		29-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033273	35.0000	205.100	7,178.50	Pressmud	UK07AF 8995	VERMA BIO & AGRO SERVICES	7,537.00
TI1424101247		29-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033274	35.0000	284.350	9,952.25	Pressmud	UP25DU6517	VERMA BIO & AGRO SERVICES	10,450.00

TI1424101248		29-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033275	35.0000	230.150	8,055.25	Pressmud	UP22AN1353	VERMA BIO & AGRO SERVICES	8,456.00
TI1424101261		29-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033288	35.0000	265.050	9,276.75	Pressmud	UP25BS 8467	VERMA BIO & AGRO SERVICES	9,739.00
TI1424101262		30-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033289	35.0000	229.450	8,030.75	Pressmud	UP22AK 5216	VERMA BIO & AGRO SERVICES	8,433.00
TI1424101492		09-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033509	35.0000	215.950	7,558.25	Pressmud	UP21BU 6380	VERMA BIO & AGRO SERVICES	7,936.00
TI1424101493		09-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033510	35.0000	233.150	8,160.25	Pressmud	UP22AK 5216	VERMA BIO & AGRO SERVICES	8,568.00
TI1424101495		09-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033512	35.0000	259.650	9,087.75	Pressmud	UP25BS 8467	VERMA BIO & AGRO SERVICES	9,542.00
TI1424101513		09-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033530	35.0000	235.650	8,247.75	Pressmud	UP22AN 1353	VERMA BIO & AGRO SERVICES	8,660.00
TI1424101514		09-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033531	35.0000	273.400	9,569.00	Pressmud	UP16AQ 8670	VERMA BIO & AGRO SERVICES	10,047.00
TI1424101515		10-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033532	35.0000	264.000	9,240.00	Pressmud	UP22AL 1314	VERMA BIO & AGRO SERVICES	9,702.00
TI1424101516		10-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033533	35.0000	255.300	8,935.50	Pressmud	UP22BD 5425	VERMA BIO & AGRO SERVICES	9,382.00
TI1424101517		10-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033534	35.0000	265.250	9,283.75	Pressmud	UP22S 7026	VERMA BIO & AGRO SERVICES	9,748.00
TI1424101518		10-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033535	35.0000	269.400	9,429.00	Pressmud	UP22AR 0605	VERMA BIO & AGRO SERVICES	9,901.00
TI1424101539		11-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033556	35.0000	256.900	8,991.50	Pressmud	UP22W 7258	VERMA BIO & AGRO SERVICES	9,442.00
TI1424101541		11-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033558	35.0000	255.500	8,942.50	Pressmud	UP25BS8467	VERMA BIO & AGRO SERVICES	9,391.00
TI1424101542		11-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033559	35.0000	209.250	7,323.75	Pressmud	UP21BU6380	VERMA BIO & AGRO SERVICES	7,690.00
TI1424101543		11-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033560	35.0000	225.650	7,897.75	Pressmud	UP22AN1353	VERMA BIO & AGRO SERVICES	8,292.00
TI1424101544		11-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033561	35.0000	227.200	7,952.00	Pressmud	UP22AK5216	VERMA BIO & AGRO SERVICES	8,350.00
TI1424101561		11-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033578	35.0000	233.300	8,165.50	Pressmud	UP22AN 1353	VERMA BIO & AGRO SERVICES	8,574.00
TI1424101563		12-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033580	35.0000	254.050	8,891.75	Pressmud	UP16AQ8670	VERMA BIO & AGRO SERVICES	9,336.00
TI1424101564		12-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033581	35.0000	264.300	9,250.50	Pressmud	UP25DZ 1592	VERMA BIO & AGRO SERVICES	9,713.00
TI1424101565		12-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033582	35.0000	257.400	9,009.00	Pressmud	UP22BD 5425	VERMA BIO & AGRO SERVICES	9,459.00
TI1424101566		12-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033583	35.0000	279.350	9,777.25	Pressmud	UP22AL 1314	VERMA BIO & AGRO SERVICES	10,265.00
TI1424101583		12-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033600	35.0000	278.300	9,740.50	Pressmud	UP25S 7026	VERMA BIO & AGRO SERVICES	10,229.00
TI1424101585		13-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033602	35.0000	274.750	9,616.25	Pressmud	UP22AR 0605	VERMA BIO & AGRO SERVICES	10,096.00
TI1424101586		13-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033603	35.0000	224.700	7,864.50	Pressmud	UP22AK 5216	VERMA BIO & AGRO SERVICES	8,259.00
TI1424101587		13-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033604	35.0000	247.450	8,660.75	Pressmud	UP22W 7258	VERMA BIO & AGRO SERVICES	9,095.00
TI1424101588		13-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033605	35.0000	209.150	7,320.25	Pressmud	UP21BU 6380	VERMA BIO & AGRO SERVICES	7,686.00
TI1424101609		14-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033626	35.0000	231.500	8,102.50	Pressmud	UP22AN1353	VERMA BIO & AGRO SERVICES	8,509.00
TI1424101610		14-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033627	35.0000	257.600	9,016.00	Pressmud	UP25DZ1592	VERMA BIO & AGRO SERVICES	9,466.00
TI1424101611		14-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033628	35.0000	267.350	9,357.25	Pressmud	UP16AQ8670	VERMA BIO & AGRO SERVICES	9,825.00
TI1424101612		14-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033629	35.0000	278.100	9,733.50	Pressmud	UP22AL1314	VERMA BIO & AGRO SERVICES	10,220.00
TI1424101613		14-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033630	35.0000	286.550	10,029.25	Pressmud	UP25BS8467	VERMA BIO & AGRO SERVICES	10,531.00
TI1424101645		15-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033662	35.0000	281.750	9,861.25	Pressmud	UP22S7026	VERMA BIO & AGRO SERVICES	10,355.00
TI1424101491		09-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033508	35.0000	231.100	8,088.50	Pressmud	UP22AN1353	VERMA BIO & AGRO SERVICES	8,493.00
TI1424101376		04-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033393	35.0000	209.500	7,332.50	Pressmud	UP22AN 1353	VERMA BIO & AGRO SERVICES	7,699.00
TI1424101377		04-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033394	35.0000	252.200	8,827.00	Pressmud	UP25DU6517	VERMA BIO & AGRO SERVICES	9,269.00
TI1424101378		04-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033395	35.0000	265.800	9,303.00	Pressmud	UP22S7026	VERMA BIO & AGRO SERVICES	9,769.00
TI1424101398		05-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033415	35.0000	229.450	8,030.75	Pressmud	UP21BU 6380	VERMA BIO & AGRO SERVICES	8,433.00
TI1424101399		05-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033416	35.0000	204.800	7,168.00	Pressmud	UP22AN 1353	VERMA BIO & AGRO SERVICES	7,526.00
TI1424101400		05-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033417	35.0000	261.250	9,143.75	Pressmud	UP16AQ 8670	VERMA BIO & AGRO SERVICES	9,602.00
TI1424101401		05-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033418	35.0000	242.300	8,480.50	Pressmud	UP22W7258	VERMA BIO & AGRO SERVICES	8,905.00
TI1424101402		05-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033419	35.0000	240.400	8,414.00	Pressmud	UP22AK 5216	VERMA BIO & AGRO SERVICES	8,834.00
TI1424101403		05-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033420	35.0000	267.400	9,359.00	Pressmud	UP22AL 1314	VERMA BIO & AGRO SERVICES	9,827.00
TI1424101420		05-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033437	35.0000	224.200	7,847.00	Pressmud	UP22AN 1353	VERMA BIO & AGRO SERVICES	8,239.00
TI1424101422		06-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033439	35.0000	274.800	9,618.00	Pressmud	UP25BS 8467	VERMA BIO & AGRO SERVICES	10,098.00
TI1424101423		06-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033440	35.0000	302.750	10,596.25	Pressmud	UP25DU 6517	VERMA BIO & AGRO SERVICES	11,126.00
TI1424101424		06-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033441	35.0000	297.750	10,421.25	Pressmud	UP22AL 1314	VERMA BIO & AGRO SERVICES	10,943.00
TI1424101425		06-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033442	35.0000	268.500	9,397.50	Pressmud	UP22BD 5425	VERMA BIO & AGRO SERVICES	9,868.00
TI1424101441		06-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033458	35.0000	283.650	9,927.75	Pressmud	UP22S 7026	VERMA BIO & AGRO SERVICES	10,424.00
TI1424101442		07-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033459	35.0000	284.400	9,954.00	Pressmud	UP22AR 0605	VERMA BIO & AGRO SERVICES	10,452.00
TI1424101443		07-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033460	35.0000	230.250	8,058.75	Pressmud	UP22AN 1353	VERMA BIO & AGRO SERVICES	8,461.00
TI1424101444		07-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033461	35.0000	224.050	7,841.75	Pressmud	UP21BU 6380	VERMA BIO & AGRO SERVICES	8,234.00
TI1424101445		07-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033462	35.0000	244.000	8,540.00	Pressmud	UP22AK 5216	VERMA BIO & AGRO SERVICES	8,968.00
TI1424101446		07-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033463	35.0000	269.000	9,415.00	Pressmud	UP16AQ 8670	VERMA BIO & AGRO SERVICES	9,885.00
TI1424101447		07-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033464	35.0000	218.600	7,651.00	Pressmud	UP22W 7258	VERMA BIO & AGRO SERVICES	8,033.00
TI1424101448		07-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033465	35.0000	256.850	8,989.75	Pressmud	UP25DZ1592	VERMA BIO & AGRO SERVICES	9,440.00
TI1424101468		08-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033485	35.0000	267.550	9,364.25	Pressmud	UP25DZ 1592	VERMA BIO & AGRO SERVICES	9,832.00
TI1424101469		08-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033486	35.0000	230.350	8,062.25	Pressmud	UP22AN 1353	VERMA BIO & AGRO SERVICES	8,466.00
TI1424101470		08-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033487	35.0000	252.200	8,827.00	Pressmud	UP22BD 5425	VERMA BIO & AGRO SERVICES	9,269.00
TI1424101471		08-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033488	35.0000	279.000	9,765.00	Pressmud	UP22AL 1314	VERMA BIO & AGRO SERVICES	10,253.00
TI1424101472		08-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033489	35.0000	250.650	8,772.75	Pressmud	UP22S 7026	VERMA BIO & AGRO SERVICES	9,211.00

TI1424101475		08-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033492	35.0000	265.550	9,294.25	Pressmud	UP25BS 8467	VERMA BIO & AGRO SERVICES	9,550.00
TI1424101488		09-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033505	35.0000	282.600	9,891.00	Pressmud	UP22AR 0605	VERMA BIO & AGRO SERVICES	10,150.00
TI1424101490		09-01-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033507	35.0000	249.450	8,730.75	Pressmud	UP22W 7258	VERMA BIO & AGRO SERVICES	9,167.00
TI1424102887		23-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034901	35.0000	250.200	8,757.00	Pressmud	UP25DZ1592	VERMA BIO & AGRO SERVICES	9,195.00
TI1424102888		23-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034902	35.0000	260.950	9,133.25	Pressmud	UP16AQ8670	VERMA BIO & AGRO SERVICES	9,589.00
TI1424102889		23-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034903	35.0000	233.050	8,156.75	Pressmud	UP25CU6967	VERMA BIO & AGRO SERVICES	8,565.00
TI1424102893		23-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034907	35.0000	256.000	8,960.00	Pressmud	UP22BD5425	VERMA BIO & AGRO SERVICES	9,408.00
TI1424102894		23-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034908	35.0000	265.350	9,287.25	Pressmud	UP22AR0605	VERMA BIO & AGRO SERVICES	9,751.00
TI1424102896		23-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034910	35.0000	268.250	9,388.75	Pressmud	UP22S7026	VERMA BIO & AGRO SERVICES	9,859.00
TI1424102897		23-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034911	35.0000	241.500	8,452.50	Pressmud	UP25DR6572	VERMA BIO & AGRO SERVICES	8,875.00
TI1424102898		23-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034912	35.0000	256.500	8,977.50	Pressmud	UP22W7258	VERMA BIO & AGRO SERVICES	9,426.00
TI1424102902		23-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034916	35.0000	223.350	7,817.25	Pressmud	UP22AN1353	VERMA BIO & AGRO SERVICES	8,207.00
TI1424102903		23-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034917	35.0000	282.450	9,885.75	Pressmud	UP25DU6517	VERMA BIO & AGRO SERVICES	10,380.00
TI1424102909		23-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034923	35.0000	254.800	8,918.00	Pressmud	UP16AQ8670	VERMA BIO & AGRO SERVICES	9,364.00
TI1424102923		24-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034937	35.0000	244.750	8,566.25	Pressmud	UP25DZ1592	VERMA BIO & AGRO SERVICES	8,994.00
TI1424102924		24-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034938	35.0000	215.200	7,532.00	Pressmud	UP25CU6967	VERMA BIO & AGRO SERVICES	7,908.00
TI1424102925		24-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034939	35.0000	271.850	9,514.75	Pressmud	UP22AU4292	VERMA BIO & AGRO SERVICES	9,991.00
TI1424102926		24-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034940	35.0000	248.100	8,683.50	Pressmud	UP22AL5821	VERMA BIO & AGRO SERVICES	9,118.00
TI1424102927		24-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034941	35.0000	246.400	8,624.00	Pressmud	UP22BD5425	VERMA BIO & AGRO SERVICES	9,056.00
TI1424102928		24-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034942	35.0000	260.450	9,115.75	Pressmud	UP22S7026	VERMA BIO & AGRO SERVICES	9,572.00
TI1424102929		24-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034943	35.0000	224.650	7,862.75	Pressmud	UP22AN1353	VERMA BIO & AGRO SERVICES	8,257.00
TI1424102930		24-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034944	35.0000	266.000	9,310.00	Pressmud	UP22AR0605	VERMA BIO & AGRO SERVICES	9,776.00
TI1424102933		24-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034947	35.0000	240.650	8,422.75	Pressmud	UP25DR6572	VERMA BIO & AGRO SERVICES	8,845.00
TI1424102937		24-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034951	35.0000	159.700	5,589.50	Pressmud	UP25DH 5391	VERMA BIO & AGRO SERVICES	5,870.00
TI1424102947		24-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034961	35.0000	246.300	8,620.50	Pressmud	UP25DZ1592	VERMA BIO & AGRO SERVICES	9,053.00
TI1424102948		24-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034962	35.0000	284.150	9,945.25	Pressmud	UP22AU4292	VERMA BIO & AGRO SERVICES	10,443.00
TI1424102950		25-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034964	35.0000	260.250	9,108.75	Pressmud	UP22AL5821	VERMA BIO & AGRO SERVICES	9,565.00
TI1424102951		25-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034965	35.0000	284.800	9,968.00	Pressmud	UP22AL1314	VERMA BIO & AGRO SERVICES	10,466.00
TI1424102955		25-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034969	35.0000	277.500	9,712.50	Pressmud	UP22BD5425	VERMA BIO & AGRO SERVICES	10,199.00
TI1424102957		25-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034971	35.0000	288.250	10,088.75	Pressmud	UP22AR0605	VERMA BIO & AGRO SERVICES	10,593.00
TI1424102958		25-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034972	35.0000	289.600	10,136.00	Pressmud	UP22S7026	VERMA BIO & AGRO SERVICES	10,642.00
TI1424102959		25-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034973	35.0000	222.850	7,799.75	Pressmud	UP22AN1353	VERMA BIO & AGRO SERVICES	8,190.00
TI1424102960		25-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034974	35.0000	260.650	9,122.75	Pressmud	UP22W7258	VERMA BIO & AGRO SERVICES	9,579.00
TI1424102886		23-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034900	35.0000	268.400	9,394.00	Pressmud	UP22AU4292	VERMA BIO & AGRO SERVICES	9,864.00
TI1424102797		20-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034811	35.0000	278.250	9,738.75	Pressmud	UP22AR0605	VERMA BIO & AGRO SERVICES	10,225.00
TI1424102798		20-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034812	35.0000	266.350	9,322.25	Pressmud	UP22BD5425	VERMA BIO & AGRO SERVICES	9,788.00
TI1424102799		20-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034813	35.0000	282.350	9,882.25	Pressmud	UP22S7026	VERMA BIO & AGRO SERVICES	10,376.00
TI1424102800		20-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034814	35.0000	248.100	8,683.50	Pressmud	UP22DR6572	VERMA BIO & AGRO SERVICES	9,118.00
TI1424102801		20-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034815	35.0000	253.950	8,888.25	Pressmud	UP22W7258	VERMA BIO & AGRO SERVICES	9,332.00
TI1424102806		20-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034820	35.0000	257.000	8,995.00	Pressmud	UP22AL5821	VERMA BIO & AGRO SERVICES	9,445.00
TI1424102807		20-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034821	35.0000	229.850	8,044.75	Pressmud	UP22AN1353	VERMA BIO & AGRO SERVICES	8,447.00
TI1424102808		20-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034822	35.0000	262.500	9,187.50	Pressmud	UP16AQ8670	VERMA BIO & AGRO SERVICES	9,648.00
TI1424102809		20-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034823	35.0000	258.500	9,047.50	Pressmud	UP25DZ1592	VERMA BIO & AGRO SERVICES	9,500.00
TI1424102812		20-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034826	35.0000	300.300	10,510.50	Pressmud	UP22AU4292	VERMA BIO& AGRO SERVICES	11,037.00
TI1424102824		20-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034838	35.0000	227.550	7,964.25	Pressmud	UP25CU6967	VERMA BIO & AGRO SERVICES	8,362.00
TI1424102828		21-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034842	35.0000	270.700	9,474.50	Pressmud	UP22AR0605	VERMA BIO & AGRO SERVICES	9,949.00
TI1424102829		21-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034843	35.0000	261.000	9,135.00	Pressmud	UP22S7026	VERMA BIO & AGRO SERVICES	9,591.00
TI1424102830		21-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034844	35.0000	263.900	9,236.50	Pressmud	UP22BD5425	VERMA BIO & AGRO SERVICES	9,699.00
TI1424102834		21-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034848	35.0000	257.300	9,005.50	Pressmud	UP22W7258	VERMA BIO & AGRO SERVICES	9,456.00
TI1424102835		21-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034849	35.0000	235.100	8,228.50	Pressmud	UP25DR6572	VERMA BIO & AGRO SERVICES	8,641.00
TI1424102836		21-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034850	35.0000	225.750	7,901.25	Pressmud	UP22AN1353	VERMA BIO & AGRO SERVICES	8,297.00
TI1424102837		21-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034851	35.0000	253.450	8,870.75	Pressmud	UP22AL5821	VERMA BIO & AGRO SERVICES	9,315.00
TI1424102842		21-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034856	35.0000	263.550	9,224.25	Pressmud	UP16AQ8670	VERMA BIO & AGRO SERVICES	9,686.00
TI1424102843		21-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034857	35.0000	309.500	10,832.50	Pressmud	UP22AU4292	VERMA BIO & AGRO SERVICES	11,375.00
TI1424102846		21-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034860	35.0000	295.550	10,344.25	Pressmud	UP25DU6517	VERMA BIO & AGRO SERVICES	10,862.00
TI1424102850		21-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034864	35.0000	233.500	8,172.50	Pressmud	UP25CU6967	VERMA BIO & AGRO SERVICES	8,581.00
TI1424102855		22-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034869	35.0000	255.950	8,958.25	Pressmud	UP25DZ1592	VERMA BIO & AGRO SERVICES	9,406.00
TI1424102857		22-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034871	35.0000	262.800	9,198.00	Pressmud	UP22BD5425	VERMA BIO & AGRO SERVICES	9,658.00
TI1424102859		22-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034873	35.0000	267.150	9,350.25	Pressmud	UP22AR0605	VERMA BIO & AGRO SERVICES	9,818.00
TI1424102860		22-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034874	35.0000	266.000	9,310.00	Pressmud	UP22S7026	VERMA BIO & AGRO SERVICES	9,776.00
TI1424102862		22-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034876	35.0000	245.500	8,592.50	Pressmud	UP22W7258	VERMA BIO & AGRO SERVICES	9,023.00

TI1424102863		22-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034877	35.0000	240.000	8,400.00	Pressmud	UP25DR6572	VERMA BIO & AGRO SERVICES	8,621.00
TI1424102868		22-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034882	35.0000	230.500	8,067.50	Pressmud	UP22AN1353	VERMA BIO & AGRO SERVICES	8,271.00
TI1424102883		23-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034897	35.0000	246.000	8,610.00	Pressmud	UP22AL5821	VERMA BIO & AGRO SERVICES	9,040.00
TI1424103060		28-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140035071	35.0000	236.350	8,272.25	Pressmud	UP25DZ 1592	VERMA BIO & AGRO SERVICES	8,686.00
TI1424103061		28-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140035072	35.0000	259.850	9,094.75	Pressmud	UP16AQ 8670	VERMA BIO & AGRO SERVICES	9,549.00
TI1424103066		28-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140035077	35.0000	301.800	10,563.00	Pressmud	UP22AU4292	VERMA BIO & AGRO SERVICES	11,091.00
TI1424103071		28-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140035082	35.0000	257.600	9,016.00	Pressmud	UP25DR 6572	VERMA BIO & AGRO SERVICES	9,466.00
TI1424103075		28-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140035086	35.0000	264.000	9,240.00	Pressmud	UP22AL5821	VERMA BIO & AGRO SERVICES	9,702.00
TI1424103077		01-03-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140035088	35.0000	231.850	8,114.75	Pressmud	UP22AN 1353	VERMA BIO & AGRO SERVICES	8,521.00
TI1424103078		01-03-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140035089	35.0000	257.250	9,003.75	Pressmud	UP22BD5425	VERMA BIO & AGRO SERVICES	9,454.00
TI1424103079		01-03-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140035090	35.0000	269.050	9,416.75	Pressmud	UP22AR0605	VERMA BIO & AGRO SERVICES	9,887.00
TI1424103080		01-03-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140035091	35.0000	228.550	7,999.25	Pressmud	UP25CU6967	VERMA BIO & AGRO SERVICES	8,399.00
TI1424103081		01-03-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140035092	35.0000	258.300	9,040.50	Pressmud	UP22W7258	VERMA BIO & AGRO SERVICES	9,493.00
TI1424103082		01-03-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140035093	35.0000	285.050	9,976.75	Pressmud	UP22S 7026	VERMA BIO & AGRO SERVICES	10,475.00
TI1424103098		01-03-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140035109	35.0000	317.550	11,114.25	Pressmud	UP22AU 4292	VERMA BIO & AGRO SERVICES	11,670.00
TI1424103104		02-03-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140035115	35.0000	253.750	8,881.25	Pressmud	UP25DZ1592	VERMA BIO & AGRO SERVICES	9,325.00
TI1424103105		02-03-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140035116	35.0000	265.250	9,283.75	Pressmud	UP16AQ8670	VERMA BIO & AGRO SERVICES	9,748.00
TI1424103107		02-03-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140035118	35.0000	240.800	8,428.00	Pressmud	UP22AL5821	VERMA BIO & AGRO SERVICES	8,850.00
TI1424103108		02-03-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140035119	35.0000	276.150	9,665.25	Pressmud	UP22AR0605	VERMA BIO & AGRO SERVICES	10,149.00
TI1424103110		02-03-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140035121	35.0000	223.650	7,827.75	Pressmud	UP22AN1353	VERMA BIO & AGRO SERVICES	8,220.00
TI1424103111		02-03-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140035122	35.0000	256.900	8,991.50	Pressmud	UP22BD5425	VERMA BIO & AGRO SERVICES	9,442.00
TI1424103112		02-03-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140035123	35.0000	269.300	9,425.50	Pressmud	UP22S7026	VERMA BIO & AGRO SERVICES	9,898.00
TI1424103113		02-03-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140035124	35.0000	231.700	8,109.50	Pressmud	UP25DR6572	VERMA BIO & AGRO SERVICES	8,516.00
TI1424103117		02-03-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140035128	35.0000	272.350	9,532.25	Pressmud	UP38M 9251	VERMA BIO & AGRO SERVICES	10,008.00
TI1424103122		02-03-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140035133	35.0000	294.000	10,290.00	Pressmud	UP22AU 4292	VERMA BIO & AGRO SERVICES	10,804.00
TI1424103124		03-03-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140035135	35.0000	238.950	8,363.25	Pressmud	UP22AL5821	VERMA BIO & AGRO SERVICES	8,781.00
TI1424103125		03-03-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140035136	35.0000	250.750	8,776.25	Pressmud	UP22W7258	VERMA BIO & AGRO SERVICES	9,214.00
TI1424103126		03-03-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140035137	35.0000	236.350	8,272.25	Pressmud	UP16AQ8670	VERMA BIO & AGRO SERVICES	8,686.00
TI1424103127		03-03-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140035138	35.0000	241.300	8,445.50	Pressmud	UP25DR1592	VERMA BIO & AGRO SERVICES	8,868.00
TI1424103128		03-03-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140035139	35.0000	247.950	8,678.25	Pressmud	UP22BD5425	VERMA BIO & AGRO SERVICES	9,112.00
TI1424103131		03-03-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140035142	35.0000	208.850	7,309.75	Pressmud	UP22AN1353	VERMA BIO& AGRO SERVICES	7,676.00
TI1424103136		03-03-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140035147	35.0000	276.150	9,665.25	Pressmud	UP22AR0605	VERMA BIO & AGRO SERVICES	10,149.00
TI1424103137		04-03-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140035148	35.0000	232.700	8,144.50	Pressmud	UP25DR6572	VERMA BIO& AGRO SERVICES	8,553.00
TI1424103055		28-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140035069	35.0000	264.450	9,255.75	Pressmud	UP22W7258	VERMA BIO & AGRO SERVICES	9,718.00
TI1424102961		25-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034975	35.0000	237.950	8,328.25	Pressmud	UP25CU6967	VERMA BIO & AGRO SERVICES	8,744.00
TI1424102963		25-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034977	35.0000	282.850	9,899.75	Pressmud	UP21BW 9250	VERMA BIO & AGRO SERVICES	10,396.00
TI1424102973		25-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034987	35.0000	218.400	7,644.00	Pressmud	UP22AN1353	VERMA BIO & AGRO SERVICES	8,026.00
TI1424102974		25-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034988	35.0000	265.750	9,301.25	Pressmud	UP22AR0605	VERMA BIO & AGRO SERVICES	9,767.00
TI1424102979		26-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034993	35.0000	252.500	8,837.50	Pressmud	UP22BD5425	VERMA BIO & AGRO SERVICES	9,280.00
TI1424102980		26-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034994	35.0000	274.350	9,602.25	Pressmud	UP22S7026	VERMA BIO & AGRO SERVICES	10,082.00
TI1424102981		26-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034995	35.0000	260.350	9,112.25	Pressmud	UP25DZ1592	VERMA BIO & AGRO SERVICES	9,568.00
TI1424102982		26-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034996	35.0000	258.150	9,035.25	Pressmud	UP16AQ8670	VERMA BIO & AGRO SERVICES	9,487.00
TI1424102987		26-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140035001	35.0000	157.250	5,503.75	Pressmud	UP25DH5391	VERMA BIO & AGRO SERVICES	5,780.00
TI1424102988		26-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140035002	35.0000	252.450	8,835.75	Pressmud	UP22W7258	VERMA BIO & AGRO SERVICES	9,278.00
TI1424102989		26-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140035003	35.0000	261.600	9,156.00	Pressmud	UP22AU4292	VERMA BIO & AGRO SERVICES	9,614.00
TI1424102994		26-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140035008	35.0000	243.350	8,517.25	Pressmud	UP22AL5821	VERMA BIO & AGRO SERVICES	8,943.00
TI1424102995		26-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140035009	35.0000	278.950	9,763.25	Pressmud	UP22AL1314	VERMA BIO& AGRO SERVICES	10,251.00
TI1424102998		26-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140035012	35.0000	229.700	8,039.50	Pressmud	UP25CU6967	VERMA BIO& AGRO SERVICES	8,442.00
TI1424103002		26-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140035016	35.0000	243.550	8,524.25	Pressmud	UP25DR 6572	VERMA BIO & AGRO SERVICES	8,950.00
TI1424103014		27-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140035028	35.0000	276.850	9,689.75	Pressmud	UP22AR0605	VERMA BIO & AGRO SERVICES	10,174.00
TI1424103015		27-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140035029	35.0000	260.050	9,101.75	Pressmud	UP22S7026	VERMA BIO & AGRO SERVICES	9,558.00
TI1424103016		27-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140035030	35.0000	233.250	8,163.75	Pressmud	UP22AN1353	VERMA BIO & AGRO SERVICES	8,572.00
TI1424103018		27-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140035032	35.0000	238.150	8,335.25	Pressmud	UP22W7258	VERMA BIO & AGRO SERVICES	8,751.00
TI1424103021		27-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140035035	35.0000	254.700	8,914.50	Pressmud	UP22BD5425	VERMA BIO & AGRO SERVICES	9,361.00
TI1424103022		27-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140035036	35.0000	251.350	8,797.25	Pressmud	UP16AQ8670	VERMA BIO & AGRO SERVICES	9,237.00
TI1424103028		27-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140035042	35.0000	238.900	8,361.50	Pressmud	UP25DZ1592	VERMA BIO & AGRO SERVICES	8,780.00
TI1424103031		27-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140035045	35.0000	259.750	9,091.25	Pressmud	UP22AU4292	VERMA BIO& AGRO SERVICES	9,545.00
TI1424103036		27-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140035050	35.0000	250.600	8,771.00	Pressmud	UP22AL 5821	VERMA BIO & AGRO SERVICES	9,209.00
TI1424103045		28-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140035059	35.0000	285.200	9,982.00	Pressmud	UP22AL1314	VERMA BIO & AGRO SERVICES	10,482.00
TI1424103046		28-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140035060	35.0000	256.950	8,993.25	Pressmud	UP22BD5425	VERMA BIO & AGRO SERVICES	9,443.00
TI1424103047		28-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140035061	35.0000	235.400	8,239.00	Pressmud	UP25CU6967	VERMA BIO & AGRO SERVICES	8,651.00

TI1424103048		28-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140035062	35.0000	231.900	8,116.50	Pressmud	UP22AN1353	VERMA BIO & AGRO SERVICES	8,532.00
TI1424103049		28-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140035063	35.0000	278.850	9,759.75	Pressmud	UP22AR0605	VERMA BIO & AGRO SERVICES	10,260.00
TI1424103051		28-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140035065	35.0000	268.400	9,394.00	Pressmud	UP22S7026	VERMA BIO & AGRO SERVICES	9,864.00
TI1424102783		19-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034797	35.0000	236.950	8,293.25	Pressmud	UP25CU 6967	VERMA BIO & AGRO SERVICES	8,707.00
TI1424102487		10-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034501	35.0000	255.250	8,933.75	Pressmud	UP16AQ8670	VERMA BIO & AGRO SERVICES	9,380.00
TI1424102488		10-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034502	35.0000	236.350	8,272.25	Pressmud	UP22AN1353	VERMA BIO & AGRO SERVICES	8,686.00
TI1424102489		10-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034503	35.0000	273.000	9,555.00	Pressmud	UP22AR0605	VERMA BIO & AGRO SERVICES	10,033.00
TI1424102490		10-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034504	35.0000	251.200	8,792.00	Pressmud	UP22W7258	VERMA BIO & AGRO SERVICES	9,232.00
TI1424102512		10-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034526	35.0000	280.800	9,828.00	Pressmud	UP25DU6517	VERMA BIO & AGRO SERVICES	10,320.00
TI1424102514		11-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034528	35.0000	249.950	8,748.25	Pressmud	UP22BD5425	VERMA BIO & AGRO SERVICES	9,186.00
TI1424102515		11-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034529	35.0000	266.500	9,327.50	Pressmud	UP22AR0605	VERMA BIO & AGRO SERVICES	9,794.00
TI1424102516		11-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034530	35.0000	248.600	8,701.00	Pressmud	UP25DZ1592	VERMA BIO & AGRO SERVICES	9,137.00
TI1424102517		11-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034531	35.0000	236.000	8,260.00	Pressmud	UP22W7258	VERMA BIO & AGRO SERVICES	8,674.00
TI1424102518		11-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034532	35.0000	253.200	8,862.00	Pressmud	UP16AQ8670	VERMA BIO & AGRO SERVICES	9,306.00
TI1424102533		11-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034547	35.0000	263.700	9,229.50	Pressmud	UP25DU6517	VERMA BIO & AGRO SERVICES	9,692.00
TI1424102535		12-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034549	35.0000	221.150	7,740.25	Pressmud	UP22AN1353	VERMA BIO & AGRO SERVICES	8,128.00
TI1424102539		12-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034553	35.0000	239.500	8,382.50	Pressmud	UP16AQ8670	VERMA BIO & AGRO SERVICES	8,803.00
TI1424102540		12-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034554	35.0000	238.450	8,345.75	Pressmud	UP25DZ1592	VERMA BIO & AGRO SERVICES	8,764.00
TI1424102543		12-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034557	35.0000	247.350	8,657.25	Pressmud	UP22BD5425	VERMA BIO & AGRO SERVICES	9,089.00
TI1424102544		12-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034558	35.0000	241.650	8,457.75	Pressmud	UP22AR0605	VERMA BIO & AGRO SERVICES	8,880.00
TI1424102559		12-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034573	35.0000	227.650	7,967.75	Pressmud	UP22AN1353	VERMA BIO & AGRO SERVICES	8,366.00
TI1424102566		13-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034580	35.0000	253.350	8,867.25	Pressmud	UP22W7258	VERMA BIO & AGRO SERVICES	9,311.00
TI1424102567		13-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034581	35.0000	258.200	9,037.00	Pressmud	UP25DR6572	VERMA BIO & AGRO SERVICES	9,489.00
TI1424102568		13-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034582	35.0000	222.300	7,780.50	Pressmud	UP25CU6967	VERMA BIO & AGRO SERVICES	8,171.00
TI1424102569		13-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034583	35.0000	165.200	5,782.00	Pressmud	UP25DH5391	VERMA BIO & AGRO SERVICES	6,072.00
TI1424102570		13-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034584	35.0000	270.150	9,455.25	Pressmud	UP25DU6517	VERMA BIO & AGRO SERVICES	9,927.00
TI1424102572		13-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034586	35.0000	241.050	8,436.75	Pressmud	UP22AL5821	VERMA BIO & AGRO SERVICES	8,859.00
TI1424102573		13-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034587	35.0000	241.600	8,456.00	Pressmud	UP16AQ8670	VERMA BIO & AGRO SERVICES	8,878.00
TI1424102574		13-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034588	35.0000	251.600	8,806.00	Pressmud	UP25DZ1592	VERMA BIO & AGRO SERVICES	9,246.00
TI1424102575		13-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034589	35.0000	244.800	8,568.00	Pressmud	UP22BD5425	VERMA BIO& AGRO SERVICES	8,996.00
TI1424102580		13-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034594	35.0000	260.650	9,122.75	Pressmud	UP22AR0605	VERMA BIO & AGRO SERVICES	9,579.00
TI1424102581		13-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034595	35.0000	218.300	7,640.50	Pressmud	UP22AN1353	VERMA BIO & AGRO SERVICES	8,023.00
TI1424102595		13-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034609	35.0000	219.400	7,679.00	Pressmud	UP25CU6967	VERMA BIO & AGRO SERVICES	8,063.00
TI1424102598		14-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034612	35.0000	271.550	9,504.25	Pressmud	UP25DU6517	VERMA BIO & AGRO SERVICES	9,980.00
TI1424102486		10-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034500	35.0000	250.650	8,772.75	Pressmud	UP25DZ1592	VERMA BIO & AGRO SERVICES	9,211.00
TI1424102365		04-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034379	35.0000	269.000	9,415.00	Pressmud	UP25BS8467	VERMA BIO & AGRO SERVICES	9,885.00
TI1424102369		05-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034383	35.0000	255.050	8,926.75	Pressmud	UP16AQ8670	VERMA BIO & AGRO SERVICES	9,373.00
TI1424102370		05-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034384	35.0000	273.950	9,588.25	Pressmud	UP25DZ1592	VERMA BIO & AGRO SERVICES	10,068.00
TI1424102371		05-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034385	35.0000	270.200	9,457.00	Pressmud	UP22BD5425	VERMA BIO & AGRO SERVICES	9,929.00
TI1424102372		05-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034386	35.0000	273.700	9,579.50	Pressmud	UP22AR0605	VERMA BIO & AGRO SERVICES	10,060.00
TI1424102387		05-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034401	35.0000	243.750	8,531.25	Pressmud	UP22AN1353	VERMA BIO & AGRO SERVICES	8,957.00
TI1424102388		06-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034402	35.0000	290.100	10,153.50	Pressmud	UP25DU6517	VERMA BIO & AGRO SERVICES	10,662.00
TI1424102391		06-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034405	35.0000	253.800	8,883.00	Pressmud	UP16AQ8670	VERMA BIO & AGRO SERVICES	9,327.00
TI1424102392		06-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034406	35.0000	259.250	9,073.75	Pressmud	UP22W7258	VERMA BIO & AGRO SERVICES	9,528.00
TI1424102393		06-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034407	35.0000	249.500	8,732.50	Pressmud	UP25DZ1592	VERMA BIO & AGRO SERVICES	9,169.00
TI1424102395		06-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034409	35.0000	253.500	8,872.50	Pressmud	UP22BD5425	VERMA BIO & AGRO SERVICES	9,317.00
TI1424102409		06-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034423	35.0000	232.250	8,128.75	Pressmud	UP22AN1353	VERMA BIO & AGRO SERVICES	8,535.00
TI1424102415		07-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034429	35.0000	268.000	9,380.00	Pressmud	UP22AR0605	VERMA BIO & AGRO SERVICES	9,850.00
TI1424102416		07-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034430	35.0000	251.150	8,790.25	Pressmud	UP25DU6517	VERMA BIO & AGRO SERVICES	9,230.00
TI1424102419		07-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034433	35.0000	243.600	8,526.00	Pressmud	UP22W7258	VERMA BIO & AGRO SERVICES	8,952.00
TI1424102421		07-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034435	35.0000	239.000	8,365.00	Pressmud	UP25DZ1592	VERMA BIO & AGRO SERVICES	8,783.00
TI1424102422		07-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034436	35.0000	238.650	8,352.75	Pressmud	UP16AQ8670	VERMA BIO & AGRO SERVICES	8,771.00
TI1424102437		08-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034451	35.0000	276.300	9,670.50	Pressmud	UP22BD5425	VERMA BIO & AGRO SERVICES	10,155.00
TI1424102439		08-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034453	35.0000	250.200	8,757.00	Pressmud	UP22W7258	VERMA BIO & AGRO SERVICES	9,195.00
TI1424102440		08-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034454	35.0000	239.600	8,386.00	Pressmud	UP22AN1353	VERMA BIO & AGRO SERVICES	8,806.00
TI1424102441		08-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034455	35.0000	282.200	9,877.00	Pressmud	UP25DU6517	VERMA BIO & AGRO SERVICES	10,371.00
TI1424102442		08-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034456	35.0000	271.000	9,485.00	Pressmud	UP22AR0605	VERMA BIO & AGRO SERVICES	9,959.00
TI1424102460		08-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034474	35.0000	238.900	8,361.50	Pressmud	UP22AN1353	VERMA BIO & AGRO SERVICES	8,780.00
TI1424102462		08-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034476	35.0000	250.450	8,765.75	Pressmud	UP16AQ8670	VERMA BIO & AGRO SERVICES	9,204.00
TI1424102464		08-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034478	35.0000	253.000	8,855.00	Pressmud	UP25DZ1592	VERMA BIO & AGRO SERVICES	9,297.00
TI1424102466		09-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034480	35.0000	267.850	9,374.75	Pressmud	UP22BD5425	VERMA BIO & AGRO SERVICES	9,843.00

TI1424102467		09-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034481	35.0000	286.300	10,020.50	Pressmud	UP22AR0605	VERMA BIO & AGRO SERVICES	10,522.00
TI1424102469		09-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034483	35.0000	254.050	8,891.75	Pressmud	UP22W7258	VERMA BIO & AGRO SERVICES	9,336.00
TI1424102470		09-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034484	35.0000	275.050	9,626.75	Pressmud	UP25DU6517	VERMA BIO & AGRO SERVICES	10,109.00
TI1424102485		10-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034499	35.0000	260.300	9,110.50	Pressmud	UP22BD5425	VERMA BIO & AGRO SERVICES	9,567.00
TI1424102702		16-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034716	35.0000	246.850	8,639.75	Pressmud	UP25DZ1592	VERMA BIO & AGRO SERVICES	9,072.00
TI1424102706		17-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034720	35.0000	288.600	10,101.00	Pressmud	UP22AU4292	VERMA BIO & AGRO SERVICES	10,607.00
TI1424102709		17-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034723	35.0000	243.500	8,522.50	Pressmud	UP22AL5821	VERMA BIO & AGRO SERVICES	8,949.00
TI1424102710		17-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034724	35.0000	215.500	7,542.50	Pressmud	UP25CU6967	VERMA BIO & AGRO SERVICES	7,921.00
TI1424102711		17-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034725	35.0000	213.800	7,483.00	Pressmud	UP22AN1353	VERMA BIO & AGRO SERVICES	7,857.00
TI1424102717		17-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034731	35.0000	252.300	8,830.50	Pressmud	UP22BD5425	VERMA BIO & AGRO SERVICES	9,273.00
TI1424102718		17-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034732	35.0000	261.500	9,152.50	Pressmud	UP16AQ8670	VERMA BIO & AGRO SERVICES	9,611.00
TI1424102721		17-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034735	35.0000	263.050	9,206.75	Pressmud	UP25DU6517	VERMA BIO & AGRO SERVICES	9,667.00
TI1424102723		17-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034737	35.0000	303.700	10,629.50	Pressmud	UP22AU4292	VERMA BIO & AGRO SERVICES	11,162.00
TI1424102724		17-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034738	35.0000	269.450	9,430.75	Pressmud	UP22AR0605	VERMA BIO & AGRO SERVICES	9,903.00
TI1424102732		17-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034746	35.0000	262.900	9,201.50	Pressmud	UP22S7026	VERMA BIO & AGRO SERVICES	9,662.00
TI1424102736		18-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034750	35.0000	242.100	8,473.50	Pressmud	UP25DR6572	VERMA BIO & AGRO SERVICES	8,898.00
TI1424102737		18-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034751	35.0000	248.800	8,708.00	Pressmud	UP22W7258	VERMA BIO & AGRO SERVICES	9,144.00
TI1424102738		18-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034752	35.0000	222.700	7,794.50	Pressmud	UP22AN1353	VERMA BIO & AGRO SERVICES	8,185.00
TI1424102739		18-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034753	35.0000	261.000	9,135.00	Pressmud	UP22AL5821	VERMA BIO & AGRO SERVICES	9,591.00
TI1424102740		18-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034754	35.0000	240.000	8,400.00	Pressmud	UP25CU6967	VERMA BIO & AGRO SERVICES	8,820.00
TI1424102741		18-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034755	35.0000	252.200	8,827.00	Pressmud	UP16AQ8670	VERMA BIO & AGRO SERVICES	9,269.00
TI1424102742		18-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034756	35.0000	270.150	9,455.25	Pressmud	UP25DU6517	VERMA BIO & AGRO SERVICES	9,927.00
TI1424102746		18-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034760	35.0000	248.150	8,685.25	Pressmud	UP25DZ1592	VERMA BIO & AGRO SERVICES	9,119.00
TI1424102747		18-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034761	35.0000	246.450	8,625.75	Pressmud	UP22BD5425	VERMA BIO & AGRO SERVICES	9,058.00
TI1424102748		18-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034762	35.0000	254.200	8,897.00	Pressmud	UP22W7258	VERMA BIO & AGRO SERVICES	9,341.00
TI1424102755		18-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034769	35.0000	240.850	8,429.75	Pressmud	UP25DR 6572	VERMA BIO & AGRO SERVICES	8,852.00
TI1424102758		18-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034772	35.0000	251.950	8,818.25	Pressmud	UP22AL5821	VERMA BIO & AGRO SERVICES	9,258.00
TI1424102768		19-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034782	35.0000	261.300	9,145.50	Pressmud	UP22AR0605	VERMA BIO & AGRO SERVICES	9,604.00
TI1424102769		19-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034783	35.0000	288.750	10,106.25	Pressmud	UP22S7026	VERMA BIO & AGRO SERVICES	10,612.00
TI1424102771		19-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034785	35.0000	224.500	7,857.50	Pressmud	UP22AN1353	VERMA BIO & AGRO SERVICES	8,250.00
TI1424102772		19-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034786	35.0000	254.250	8,898.75	Pressmud	UP16AQ8670	VERMA BIO & AGRO SERVICES	9,343.00
TI1424102778		19-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034792	35.0000	251.300	8,795.50	Pressmud	UP25DZ1592	VERMA BIO & AGRO SERVICES	9,236.00
TI1424102779		19-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034793	35.0000	264.900	9,271.50	Pressmud	UP25DU6517	VERMA BIO & AGRO SERVICES	9,736.00
TI1424102782		19-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034796	35.0000	290.200	10,157.00	Pressmud	UP22AU 4292	VERMA BIO & AGRO SERVICES	10,665.00
TI1424102697		16-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034711	35.0000	251.400	8,799.00	Pressmud	UP22W7258	VERMA BIO & AGRO SERVICES	9,239.00
TI1424102603		14-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034617	35.0000	247.750	8,671.25	Pressmud	UP22W7258	VERMA BIO & AGRO SERVICES	9,105.00
TI1424102604		14-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034618	35.0000	244.700	8,564.50	Pressmud	UP25DR6572	VERMA BIO & AGRO SERVICES	8,993.00
TI1424102605		14-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034619	35.0000	234.550	8,209.25	Pressmud	UP22AL5821	VERMA BIO & AGRO SERVICES	8,619.00
TI1424102606		14-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034620	35.0000	245.200	8,582.00	Pressmud	UP16AQ8670	VERMA BIO & AGRO SERVICES	9,012.00
TI1424102607		14-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034621	35.0000	243.400	8,519.00	Pressmud	UP25DZ1592	VERMA BIO & AGRO SERVICES	8,945.00
TI1424102611		14-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034625	35.0000	259.500	9,082.50	Pressmud	UP22BD5425	VERMA BIO & AGRO SERVICES	9,537.00
TI1424102613		14-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034627	35.0000	267.850	9,374.75	Pressmud	UP22AR0605	VERMA BIO & AGRO SERVICES	9,843.00
TI1424102622		14-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034636	35.0000	214.900	7,521.50	Pressmud	UP22AN1353	VERMA BIO & AGRO SERVICES	7,898.00
TI1424102631		14-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034645	35.0000	285.000	9,975.00	Pressmud	UP22AU4292	VERMA BIO & AGRO SERVICES	10,473.00
TI1424102636		15-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034650	35.0000	274.650	9,612.75	Pressmud	UP25DU6517	VERMA BIO & AGRO SERVICES	10,093.00
TI1424102639		15-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034653	35.0000	254.450	8,905.75	Pressmud	UP22W7258	VERMA BIO & AGRO SERVICES	9,352.00
TI1424102640		15-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034654	35.0000	243.100	8,508.50	Pressmud	UP25DR6572	VERMA BIO & AGRO SERVICES	8,935.00
TI1424102641		15-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034655	35.0000	228.400	7,994.00	Pressmud	UP25CU6967	VERMA BIO & AGRO SERVICES	8,394.00
TI1424102643		15-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034657	35.0000	262.450	9,185.75	Pressmud	UP22AL5821	VERMA BIO & AGRO SERVICES	9,646.00
TI1424102644		15-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034658	35.0000	254.800	8,918.00	Pressmud	UP25DZ1592	VERMA BIO& AGRO SERVICES	9,364.00
TI1424102648		15-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034662	35.0000	247.950	8,678.25	Pressmud	UP16AQ8670	VERMA BIO & AGRO SERVICES	9,112.00
TI1424102649		15-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034663	35.0000	256.750	8,986.25	Pressmud	UP22BD5425	VERMA BIO& AGRO SERVICES	9,436.00
TI1424102653		15-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034667	35.0000	273.500	9,572.50	Pressmud	UP22AR0605	VERMA BIO & AGRO SERVICES	10,051.00
TI1424102654		15-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034668	35.0000	251.700	8,809.50	Pressmud	UP22W7258	VERMA BIO & AGRO SERVICES	9,250.00
TI1424102655		15-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034669	35.0000	224.400	7,854.00	Pressmud	UP25DR6572	VERMA BIO & AGRO SERVICES	8,246.00
TI1424102673		16-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034687	35.0000	249.050	8,716.75	Pressmud	UP25DZ1592	VERMA BIO & AGRO SERVICES	9,153.00
TI1424102674		16-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034688	35.0000	225.000	7,875.00	Pressmud	UP25CU6967	VERMA BIO & AGRO SERVICES	8,269.00
TI1424102676		16-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034690	35.0000	310.750	10,876.25	Pressmud	UP22AU4292	VERMA BIO & AGRO SERVICES	11,420.00
TI1424102677		16-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034691	35.0000	248.200	8,687.00	Pressmud	UP22AL5821	VERMA BIO & AGRO SERVICES	9,121.00
TI1424102678		16-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034692	35.0000	224.700	7,864.50	Pressmud	UP22AN1353	VERMA BIO & AGRO SERVICES	8,259.00
TI1424102679		16-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034693	35.0000	265.300	9,285.50	Pressmud	UP25DU6517	VERMA BIO & AGRO SERVICES	9,750.00

TI1424102680		16-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034694	35.0000	257.800	9,023.00	Pressmud	UP22BD5425	VERMA BIO & AGRO SERVICES	9,475.00
TI1424102682		16-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034696	35.0000	261.150	9,140.25	Pressmud	UP16AQ8670	VERMA BIO & AGRO SERVICES	9,597.00
TI1424102683		16-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034697	35.0000	266.700	9,334.50	Pressmud	UP22AR0605	VERMA BIO & AGRO SERVICES	9,801.00
TI1424102696		16-02-2025	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140034710	35.0000	233.400	8,169.00	Pressmud	UP25DR6572	VERMA BIO & AGRO SERVICES	8,577.00
TI1424101155		25-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033182	35.0000	269.000	9,415.00	Pressmud	UP16AQ 8670	VERMA BIO & AGRO SERVICES	9,885.00
TI1424100607		26-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032641	35.0000	268.250	9,388.75	Pressmud	UP22BD 5425	VERMA BIO & AGRO SERVICES	9,859.00
TI1424100608		26-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032642	35.0000	263.050	9,206.75	Pressmud	UP22AL 5821	VERMA BIO & AGRO SERVICES	9,667.00
TI1424100609		26-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032643	35.0000	269.400	9,429.00	Pressmud	UP22S 7026	VERMA BIO& AGRO SERVICES	9,901.00
TI1424100610		26-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032644	35.0000	279.800	9,793.00	Pressmud	UP22AR 0605	VERMA BIO & AGRO SERVICES	10,283.00
TI1424100611		26-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032645	35.0000	215.700	7,549.50	Pressmud	UK07AF 8995	VERMA BIO& AGRO SERVICES	7,928.00
TI1424100616		26-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032650	35.0000	345.700	12,099.50	Pressmud	UP25DU 6517	VERMA BIO & AGRO SERVICES	12,706.00
TI1424100620		26-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032654	35.0000	269.850	9,444.75	Pressmud	UP25BS 8467	VERMA BIO & AGRO SERVICES	9,917.00
TI1424100627		27-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032661	35.0000	210.650	7,372.75	Pressmud	UP21BU 6380	VERMA BIO & AGRO SERVICES	7,741.00
TI1424100628		27-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032662	35.0000	244.400	8,554.00	Pressmud	UP22AK 5216	VERMA BIO & AGRO SERVICES	8,982.00
TI1424100629		27-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032663	35.0000	254.800	8,918.00	Pressmud	UP25DZ 1592	VERMA BIO & AGRO SERVICES	9,364.00
TI1424100630		27-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032664	35.0000	285.600	9,996.00	Pressmud	UP22AL 1314	VERMA BIO & AGRO SERVICES	10,496.00
TI1424100631		27-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032665	35.0000	254.150	8,895.25	Pressmud	UP16AQ 8670	VERMA BIO & AGRO SERVICES	9,339.00
TI1424100632		27-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032666	35.0000	247.100	8,648.50	Pressmud	UP25DR 6572	VERMA BIO & AGRO SERVICES	9,081.00
TI1424100633		27-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032667	35.0000	259.450	9,080.75	Pressmud	UP22W 7258	VERMA BIO & AGRO SERVICES	9,535.00
TI1424100634		27-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032668	35.0000	272.200	9,527.00	Pressmud	UP22AL 5821	VERMA BIO & AGRO SERVICES	10,003.00
TI1424100635		27-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032669	35.0000	277.900	9,726.50	Pressmud	UP22AY 0440	VERMA BIO & AGRO SERVICES	10,213.00
TI1424100636		27-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032670	35.0000	268.400	9,394.00	Pressmud	UP22BD 5425	VERMA BIO& AGRO SERVICES	9,864.00
TI1424100641		27-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032675	35.0000	285.050	9,976.75	Pressmud	UP22AR 0605	VERMA BIO &AGRO SERVICES	10,475.00
TI1424100643		27-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032677	35.0000	276.000	9,660.00	Pressmud	UP22S 7026	VERMA BIO& AGRO SERVICES	10,144.00
TI1424100644		27-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032678	35.0000	210.150	7,355.25	Pressmud	UK07AF 8995	VERMA BIO & AGRO SERVICES	7,723.00
TI1424100645		28-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032679	35.0000	330.450	11,565.75	Pressmud	UP25DV 6517	VERMA BIO & AGRO SERVICES	12,144.00
TI1424100646		28-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032680	35.0000	277.050	9,696.75	Pressmud	UP25BS 8467	VERMA BIO & AGRO SERVICES	10,181.00
TI1424100647		28-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032681	35.0000	243.450	8,520.75	Pressmud	UP22AK 5216	VERMA BIO & AGRO SERVICES	8,947.00
TI1424100648		28-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032682	35.0000	229.350	8,027.25	Pressmud	UP21BU 6380	VERMA BIO & AGRO SERVICES	8,429.00
TI1424100649		28-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032683	35.0000	240.250	8,408.75	Pressmud	UP16AQ 8670	VERMA BIO & AGRO SERVICES	8,829.00
TI1424100650		28-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032684	35.0000	280.950	9,833.25	Pressmud	UP25DZ 1592	VERMA BIO & AGRO SERVICES	10,325.00
TI1424100651		28-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032685	35.0000	288.200	10,087.00	Pressmud	UP22AL 1314	VERMA BIO & AGRO SERVICES	10,591.00
TI1424100652		28-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032686	35.0000	259.900	9,096.50	Pressmud	UP25DR 6572	VERMA BIO & AGRO SERVICES	9,551.00
TI1424100653		28-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032687	35.0000	282.600	9,891.00	Pressmud	UP22AL 5821	VERMA BIO& AGRO SERVICES	10,385.00
TI1424100657		28-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032691	35.0000	280.400	9,814.00	Pressmud	UP22BD 5425	VERMA BIO& AGRO SERVICES	10,304.00
TI1424100606		26-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032640	35.0000	271.450	9,500.75	Pressmud	UP22AY 0440	VERMA BIO & AGRO SERVICES	9,977.00
TI1424100575		23-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032609	35.0000	267.750	9,371.25	Pressmud	UP22AL 5821	VERMA BIO & AGRO SERVICES	9,839.00
TI1424100576		23-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032610	35.0000	267.650	9,367.75	Pressmud	UP22AY 0440	VERMA BIO & AGRO SERVICES	9,836.00
TI1424100577		23-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032611	35.0000	254.300	8,900.50	Pressmud	UP22BT 5425	VERMA BIO & AGRO SERVICES	9,347.00
TI1424100578		23-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032612	35.0000	284.200	9,947.00	Pressmud	UP22AR0605	VERMA BIO & AGRO SERVICES	10,445.00
TI1424100579		24-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032613	35.0000	211.950	7,418.25	Pressmud	UK07AF 8995	VERMA BIO & AGRO SERVICES	7,788.00
TI1424100580		24-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032614	35.0000	275.900	9,656.50	Pressmud	UP22S 7026	VERMA BIO & AGRO SERVICES	10,139.00
TI1424100581		24-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032615	35.0000	257.800	9,023.00	Pressmud	UP22W 7258	VERMA BIO & AGRO SERVICES	9,475.00
TI1424100582		24-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032616	35.0000	263.500	9,222.50	Pressmud	UP25BS8467	VERMA BIO & AGRO SERVICES	9,685.00
TI1424100583		24-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032617	35.0000	235.850	8,254.75	Pressmud	UP22AK 5216	VERMA BIO & AGRO SERVICES	8,667.00
TI1424100584		24-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032618	35.0000	210.050	7,351.75	Pressmud	UP21BU 6380	VERMA BIO & AGRO SERVICES	7,720.00
TI1424100585		24-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032619	35.0000	253.400	8,869.00	Pressmud	UP25DZ 1592	VERMA BIO & AGRO SERVICES	9,313.00
TI1424100586		24-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032620	35.0000	252.700	8,844.50	Pressmud	UP16AQ8670	VERMA BIO & AGRO SERVICES	9,287.00
TI1424100587		24-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032621	35.0000	288.350	10,092.25	Pressmud	UP22AL 1314	VERMA BIO &AGRO SERVICES	10,596.00
TI1424100588		25-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032622	35.0000	259.200	9,072.00	Pressmud	UP22AL 5821	VERMA BIO & AGRO SERVICES	9,526.00
TI1424100589		25-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032623	35.0000	269.450	9,430.75	Pressmud	UP22BD 5425	VERMA BIO & AGRO SERVICES	9,903.00
TI1424100590		25-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032624	35.0000	264.750	9,266.25	Pressmud	UP22AY 0440	VERMA BIO & AGRO SERVICES	9,730.00
TI1424100591		25-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032625	35.0000	287.150	10,050.25	Pressmud	UP22AR 0605	VERMA BIO & AGRO SERVICES	10,552.00
TI1424100592		25-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032626	35.0000	254.000	8,890.00	Pressmud	UP25DR 6572	VERMA BIO & AGRO SERVICES	9,334.00
TI1424100593		25-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032627	35.0000	322.300	11,280.50	Pressmud	UP25DU 6517	VERMA BIO & AGRO SERVICES	11,845.00
TI1424100594		25-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032628	35.0000	279.200	9,772.00	Pressmud	UP22S 7026	VERMA BIO & AGRO SERVICES	10,260.00
TI1424100595		25-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032629	35.0000	232.350	8,132.25	Pressmud	UK07AF 8995	VERMA BIO & AGRO SERVICES	8,538.00
TI1424100596		25-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032630	35.0000	258.600	9,051.00	Pressmud	UP22W 7258	VERMA BIO & AGRO SERVICES	9,503.00
TI1424100597		25-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032631	35.0000	255.100	8,928.50	Pressmud	UP25BS 8467	VERMA BIO & AGRO SERVICES	9,375.00
TI1424100598		25-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032632	35.0000	209.300	7,325.50	Pressmud	UP21BU 6380	VERMA BIO &AGRO SERVICES	7,692.00
TI1424100599		25-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032633	35.0000	228.300	7,990.50	Pressmud	UP22AK 5216	VERMA BIO & AGRO SERVICES	8,391.00

TI1424100601		25-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032635	35.0000	265.350	9,287.25	Pressmud	UP25DZ 1592	VERMA BIO & AGRO SERVICES	9,455.00
TI1424100602		25-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032636	35.0000	242.450	8,485.75	Pressmud	UP16AQ 8670	VERMA BIO& AGRO SERVICES	8,640.00
TI1424100603		26-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032637	35.0000	252.550	8,839.25	Pressmud	UP25DR 6572	VERMA BIO & AGRO SERVICES	9,281.00
TI1424100604		26-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032638	35.0000	258.250	9,038.75	Pressmud	UP22W 7258	VERMA BIO & AGRO SERVICES	9,491.00
TI1424100605		26-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032639	35.0000	295.800	10,353.00	Pressmud	UP22AL 1314	VERMA BIO & AGRO SERVICES	10,871.00
TI1424100715		30-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032742	35.0000	282.250	9,878.75	Pressmud	UP22AR 0605	VERMA BIO & AGRO SERVICES	10,373.00
TI1424100716		30-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032743	35.0000	279.000	9,765.00	Pressmud	UP25BS 8467	VERMA BIO & AGRO SERVICES	10,253.00
TI1424100717		30-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032744	35.0000	266.600	9,331.00	Pressmud	UP22BD 5425	VERMA BIO & AGRO SERVICES	9,797.00
TI1424100735		01-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032762	35.0000	267.050	9,346.75	Pressmud	UP25DZ 1592	VERMA BIO& AGRO SERVICES	9,815.00
TI1424100737		01-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032764	35.0000	235.750	8,251.25	Pressmud	UP21BU 6380	VERMA BIO& AGRO SERVICES	8,663.00
TI1424100738		01-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032765	35.0000	241.600	8,456.00	Pressmud	UP22AK 5216	VERMA BIO& AGRO SERVICES	8,878.00
TI1424100740		01-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032767	35.0000	266.200	9,317.00	Pressmud	UP16AQ 8670	VERMA BIO& AGRO SERVICES	9,783.00
TI1424100745		02-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032772	35.0000	278.000	9,730.00	Pressmud	UP22AL 5821	VERMA BIO & AGRO SERVICES	10,216.00
TI1424100746		02-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032773	35.0000	283.300	9,915.50	Pressmud	UP22BD 5425	VERMA BIO & AGRO SERVICES	10,412.00
TI1424100747		02-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032774	35.0000	291.650	10,207.75	Pressmud	UP22AL 1314	VERMA BIO & AGRO SERVICES	10,718.00
TI1424100748		02-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032775	35.0000	297.350	10,407.25	Pressmud	UP22AR 0605	VERMA BIO & AGRO SERVICES	10,927.00
TI1424100749		02-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032776	35.0000	227.200	7,952.00	Pressmud	UK07AF 8995	VERMA BIO & AGRO SERVICES	8,350.00
TI1424100750		02-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032777	35.0000	290.500	10,167.50	Pressmud	UP22AY 0440	VERMA BIO & AGRO SERVICES	10,676.00
TI1424100751		02-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032778	35.0000	317.550	11,114.25	Pressmud	UP25DU 6517	VERMA BIO & AGRO SERVICES	11,670.00
TI1424100752		02-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032779	35.0000	264.250	9,248.75	Pressmud	UP25DR 6572	VERMA BIO & AGRO SERVICES	9,711.00
TI1424100753		02-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032780	35.0000	263.550	9,224.25	Pressmud	UP22W 7258	VERMA BIO & AGRO SERVICES	9,686.00
TI1424100754		02-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032781	35.0000	297.550	10,414.25	Pressmud	UP25BS 8467	VERMA BIO & AGRO SERVICES	10,934.00
TI1424100755		02-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032782	35.0000	282.450	9,885.75	Pressmud	UP22S 7026	VERMA BIO & AGRO SERVICES	10,380.00
TI1424100756		02-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032783	35.0000	211.050	7,386.75	Pressmud	UP21BU 6380	VERMA BIO & AGRO SERVICES	7,757.00
TI1424100757		02-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032784	35.0000	222.900	7,801.50	Pressmud	UP22AK 5216	VERMA BIO & AGRO SERVICES	8,192.00
TI1424100763		02-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032790	35.0000	262.000	9,170.00	Pressmud	UP25DZ 1592	VERMA BIO & AGRO SERVICES	9,628.00
TI1424100764		02-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032791	35.0000	262.100	9,173.50	Pressmud	UP16AQ 8670	VERMA BIO & AGRO SERVICES	9,632.00
TI1424100765		02-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032792	35.0000	276.900	9,691.50	Pressmud	UP22AL 1314	VERMA BIO & AGRO SERVICES	10,176.00
TI1424100766		03-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032793	35.0000	263.800	9,233.00	Pressmud	UP22AL 5821	VERMA BIO & AGRO SERVICES	9,695.00
TI1424100767		03-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032794	35.0000	262.000	9,170.00	Pressmud	UP22AY 0440	VERMA BIO & AGRO SERVICES	9,628.00
TI1424100768		03-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032795	35.0000	303.550	10,624.25	Pressmud	UP25DU 6517	VERMA BIO & AGRO SERVICES	11,156.00
TI1424100769		03-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032796	35.0000	261.050	9,136.75	Pressmud	UP22BD 5425	VERMA BIO & AGRO SERVICES	9,593.00
TI1424100770		03-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032797	35.0000	248.050	8,681.75	Pressmud	UP25DR 6572	VERMA BIO & AGRO SERVICES	9,116.00
TI1424100771		03-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032798	35.0000	271.800	9,513.00	Pressmud	UP22AR 0605	VERMA BIO & AGRO SERVICES	9,989.00
TI1424100772		03-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032799	35.0000	268.300	9,390.50	Pressmud	UP22S 7026	VERMA BIO & AGRO SERVICES	9,861.00
TI1424100714		30-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032741	35.0000	266.550	9,329.25	Pressmud	UP22W 7258	VERMA BIO & AGRO SERVICES	9,795.00
TI1424100661		28-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032695	35.0000	282.500	9,887.50	Pressmud	UP22AY 0440	VERMA BIO& AGRO SERVICES	10,382.00
TI1424100663		28-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032697	35.0000	213.550	7,474.25	Pressmud	UK07AF 8995	VERMA BIO& AGRO SERVICES	7,848.00
TI1424100664		28-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032698	35.0000	286.600	10,031.00	Pressmud	UP22AR 0605	VERMA BIO & AGRO SERVICES	10,533.00
TI1424100665		29-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032699	35.0000	263.500	9,222.50	Pressmud	UP22S 7026	VERMA BIO & AGRO SERVICES	9,685.00
TI1424100666		29-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032700	35.0000	269.250	9,423.75	Pressmud	UP22W 7258	VERMA BIO & AGRO SERVICES	9,896.00
TI1424100667		29-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032701	35.0000	267.100	9,348.50	Pressmud	UP25BS 8467	VERMA BIO & AGRO SERVICES	9,817.00
TI1424100668		29-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032702	35.0000	220.900	7,731.50	Pressmud	UP21BU 6380	VERMA BIO & AGRO SERVICES	8,118.00
TI1424100669		29-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032703	35.0000	240.550	8,419.25	Pressmud	UP22AK 5216	VERMA BIO & AGRO SERVICES	8,839.00
TI1424100670		29-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032704	35.0000	259.750	9,091.25	Pressmud	UP16AQ 8670	VERMA BIO & AGRO SERVICES	9,545.00
TI1424100672		29-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032706	35.0000	269.750	9,441.25	Pressmud	UP25DZ 1592	VERMA BIO& AGRO SERVICES	9,913.00
TI1424100673		29-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032707	35.0000	240.450	8,415.75	Pressmud	UP25DR 6572	VERMA BIO& AGRO SERVICES	8,836.00
TI1424100674		29-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032708	35.0000	322.500	11,287.50	Pressmud	UP25DU 6517	VERMA BIO& AGRO SERVICES	11,852.00
TI1424100677		29-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032711	35.0000	297.500	10,412.50	Pressmud	UP22AL 1314	VERMA BIO& AGRO SERVICES	10,933.00
TI1424100678		29-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032712	35.0000	278.450	9,745.75	Pressmud	UP22AL 5821	VERMA BIO & AGRO SERVICES	10,234.00
TI1424100681		29-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032715	35.0000	272.750	9,546.25	Pressmud	UP22AY 0440	VERMA BIO & AGRO SERVICES	10,024.00
TI1424100682		29-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032716	35.0000	267.850	9,374.75	Pressmud	UP22BD 5425	VERMA BIO & AGRO SERVICES	9,843.00
TI1424100683		30-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032717	35.0000	278.250	9,738.75	Pressmud	UP22AR 0605	VERMA BIO & AGRO SERVICES	10,225.00
TI1424100684		30-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032718	35.0000	270.750	9,476.25	Pressmud	UP22S 7026	VERMA BIO & AGRO SERVICES	9,950.00
TI1424100685		30-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032719	35.0000	213.500	7,472.50	Pressmud	UK07AF 8995	VERMA BIO & AGRO SERVICES	7,847.00
TI1424100686		30-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032720	35.0000	259.000	9,065.00	Pressmud	UP22W 7258	VERMA BIO & AGRO SERVICES	9,519.00
TI1424100687		30-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032721	35.0000	280.700	9,824.50	Pressmud	UP25BS 8467	VERMA BIO & AGRO SERVICES	10,317.00
TI1424100688		30-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032722	35.0000	242.650	8,492.75	Pressmud	UP22AK 5216	VERMA BIO & AGRO SERVICES	8,917.00
TI1424100689		30-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032723	35.0000	224.250	7,848.75	Pressmud	UP21BU 6380	VERMA BIO & AGRO SERVICES	8,241.00
TI1424100690		30-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032724	35.0000	256.400	8,974.00	Pressmud	UP16AQ 8670	VERMA BIO & AGRO SERVICES	9,422.00
TI1424100703		30-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032730	35.0000	261.600	9,156.00	Pressmud	UP25DZ1592	VERMA BIO & AGRO SERVICES	9,614.00

TI1424100704		30-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032731	35.0000	269.600	9,436.00	Pressmud	UP22AL 1314	VERMA BIO & AGRO SERVICES	9,906.00
TI1424100706		30-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032733	35.0000	253.000	8,855.00	Pressmud	UP25DR 6572	VERMA BIO & AGRO SERVICES	9,390.00
TI1424100711		30-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032738	35.0000	269.550	9,434.25	Pressmud	UP22AL 5821	VERMA BIO & AGRO SERVICES	9,906.00
TI1424100712		30-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032739	35.0000	276.200	9,667.00	Pressmud	UP22AY 0440	VERMA BIO & AGRO SERVICES	10,151.00
TI1424100713		30-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032740	35.0000	212.300	7,430.50	Pressmud	UK07AF 8995	VERMA BIO & AGRO SERVICES	7,803.00
TI1424100574		23-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032608	35.0000	282.550	9,889.25	Pressmud	UP22AL 1314	VERMA BIO& AGRO SERVICES	10,383.00
TI1424100481		16-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032515	35.0000	270.800	9,478.00	Pressmud	UP25 DZ 1592	VERMA BIO & AGRO SERVICES	9,952.00
TI1424100482		16-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032516	35.0000	212.450	7,435.75	Pressmud	UP22AK 5216	VERMA BIO & AGRO SERVICES	7,808.00
TI1424100483		16-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032517	35.0000	280.650	9,822.75	Pressmud	UP22AL 5821	VERMA BIO & AGRO SERVICES	10,315.00
TI1424100484		16-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032518	35.0000	275.750	9,651.25	Pressmud	UP22BD 5425	VERMA BIO & AGRO SERVICES	10,133.00
TI1424100485		16-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032519	35.0000	292.450	10,235.75	Pressmud	UP22S 7026	VERMA BIO & AGRO SERVICES	10,748.00
TI1424100486		16-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032520	35.0000	291.300	10,195.50	Pressmud	UP22AR0605	VERMA BIO & AGRO SERVICES	10,706.00
TI1424100487		16-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032521	35.0000	271.700	9,509.50	Pressmud	UP25BS 8467	VERMA BIO & AGRO SERVICES	9,986.00
TI1424100488		17-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032522	35.0000	242.900	8,501.50	Pressmud	UP 22W 7258	VERMA BIO & AGRO SERVICES	8,928.00
TI1424100489		17-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032523	35.0000	211.500	7,402.50	Pressmud	UP21BU 6380	VERMA BIO & AGRO SERVICES	7,773.00
TI1424100490		17-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032524	35.0000	250.300	8,760.50	Pressmud	UP22AK 5216	VERMA BIO & AGRO SERVICES	9,199.00
TI1424100491		17-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032525	35.0000	305.150	10,680.25	Pressmud	UP22AL 1314	VERMA BIO & AGRO SERVICES	11,214.00
TI1424100492		17-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032526	35.0000	254.600	8,911.00	Pressmud	UP25DP 0645	VERMA BIO & AGRO SERVICES	9,357.00
TI1424100493		17-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032527	35.0000	266.750	9,336.25	Pressmud	UP16AQ 8670	VERMA BIO & AGRO SERVICES	9,802.00
TI1424100494		17-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032528	35.0000	275.150	9,630.25	Pressmud	UP25DZ1592	VERMA BIO & AGRO SERVICES	10,112.00
TI1424100495		17-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032529	35.0000	288.000	10,080.00	Pressmud	UP22BD 5425	VERMA BIO & AGRO SERVICES	10,584.00
TI1424100496		17-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032530	35.0000	292.950	10,253.25	Pressmud	UP22AL 5821	VERMA BIO & AGRO SERVICES	10,765.00
TI1424100497		17-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032531	35.0000	294.950	10,323.25	Pressmud	UP22AR 0605	VERMA BIO & AGRO SERVICES	10,839.00
TI1424100498		18-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032532	35.0000	245.700	8,599.50	Pressmud	UP16AQ8670	VERMA BIO & AGRO SERVICES	9,030.00
TI1424100499		18-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032533	35.0000	278.500	9,747.50	Pressmud	UP25BS 8467	VERMA BIO & AGRO SERVICES	10,236.00
TI1424100500		18-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032534	35.0000	240.300	8,410.50	Pressmud	UP22W7258	VERMA BIO & AGRO SERVICES	8,831.00
TI1424100501		18-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032535	35.0000	232.350	8,132.25	Pressmud	UP22AK 5216	VERMA BIO & AGRO SERVICES	8,538.00
TI1424100502		18-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032536	35.0000	213.750	7,481.25	Pressmud	UP21BU 6380	VERMA BIO & AGRO SERVICES	7,855.00
TI1424100503		18-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032537	35.0000	273.450	9,570.75	Pressmud	UP22AL 1314	VERMA BIO & AGRO SERVICES	10,049.00
TI1424100504		18-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032538	35.0000	256.100	8,963.50	Pressmud	UP25DZ 1592	VERMA BIO& AGRO SERVICES	9,412.00
TI1424100505		18-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032539	35.0000	222.700	7,794.50	Pressmud	UP25DR 6572	VERMA BIO& AGRO SERVICES	8,185.00
TI1424100506		18-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032540	35.0000	289.650	10,137.75	Pressmud	UP25BV 6517	VERMA BIO& AGRO SERVICES	10,644.00
TI1424100507		18-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032541	35.0000	268.550	9,399.25	Pressmud	UP22AR 0605	VERMA BIO& AGRO SERVICES	9,869.00
TI1424100508		18-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032542	35.0000	287.650	10,067.75	Pressmud	UP22S 7026	VERMA BIO & AGRO SERVICES	10,572.00
TI1424100509		18-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032543	35.0000	246.250	8,618.75	Pressmud	UP22BD 5425	VERMA BIO & AGRO SERVICES	9,049.00
TI1424100510		18-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032544	35.0000	273.200	9,562.00	Pressmud	UP22AL 5821	VERMA BIO & AGRO SERVICES	10,040.00
TI1424100480		16-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032514	35.0000	252.100	8,823.50	Pressmud	UP25DP 0645	VERMA BIO & AGRO SERVICES	9,266.00
TI1424100449		12-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032483	35.0000	229.450	8,030.75	Pressmud	UP22BD 5425	VERMA BIO &AGRO SERVICES	8,433.00
TI1424100450		12-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032484	35.0000	235.200	8,232.00	Pressmud	UP22S 7026	VERMA BIO &AGRO SERVICES	8,644.00
TI1424100451		12-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032485	35.0000	257.600	9,016.00	Pressmud	UP22AR 0605	VERMA BIO &AGRO SERVICES	9,466.00
TI1424100452		12-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032486	35.0000	242.400	8,484.00	Pressmud	UP22W 7258	VERMA BIO & AGRO SERVICES	8,908.00
TI1424100453		12-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032487	35.0000	278.300	9,740.50	Pressmud	UP22BS 8467	VERMA BIO & AGRO SERVICES	10,229.00
TI1424100454		13-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032488	35.0000	162.750	5,696.25	Pressmud	UP21BU 6380	VERMA BIO & AGRO SERVICES	5,980.00
TI1424100455		13-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032489	35.0000	211.350	7,397.25	Pressmud	UP22AK 5216	VERMA BIO & AGRO SERVICES	7,767.00
TI1424100456		13-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032490	35.0000	253.500	8,872.50	Pressmud	UP16AQ 8670	VERMA BIO &AGRO SERVICES	9,317.00
TI1424100457		13-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032491	35.0000	290.600	10,171.00	Pressmud	UP22AL 1314	VERMA BIO & AGRO SERVICES	10,679.00
TI1424100458		14-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032492	35.0000	265.100	9,278.50	Pressmud	UP25DZ 1592	VERMA BIO & AGRO SERVICES	9,743.00
TI1424100459		14-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032493	35.0000	253.100	8,858.50	Pressmud	UP22AL 5821	VERMA BIO & AGRO SERVICES	9,301.00
TI1424100460		14-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032494	35.0000	259.950	9,098.25	Pressmud	UP22BD 5425	VERMA BIO & AGRO SERVICES	9,552.00
TI1424100461		14-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032495	35.0000	292.950	10,253.25	Pressmud	UP22S 7026	VERMA BIO & AGRO SERVICES	10,765.00
TI1424100462		14-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032496	35.0000	273.950	9,588.25	Pressmud	UP22AR 0605	VERMA BIO & AGRO SERVICES	10,068.00
TI1424100463		14-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032497	35.0000	275.250	9,633.75	Pressmud	UP22W 7258	VERMA BIO & AGRO SERVICES	10,116.00
TI1424100464		14-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032498	35.0000	265.050	9,276.75	Pressmud	UP25BS 8467	VERMA BIO & AGRO SERVICES	9,741.00
TI1424100465		14-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032499	35.0000	242.600	8,491.00	Pressmud	UP22AK 5216	VERMA BIO & AGRO SERVICES	8,915.00
TI1424100467		14-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032501	35.0000	218.500	7,647.50	Pressmud	UP21BU 6380	VERMA BIO & AGRO SERVICES	8,030.00
TI1424100468		14-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032502	35.0000	265.500	9,292.50	Pressmud	UP16AQ 8670	VERMA BIO & AGRO SERVICES	9,757.00
TI1424100469		14-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032503	35.0000	232.950	8,153.25	Pressmud	UP25DP 0645	VERMA BIO & AGRO SERVICES	8,561.00
TI1424100470		15-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032504	35.0000	262.150	9,175.25	Pressmud	UP22BD 5425	VERMA BIO & AGRO SERVICES	9,633.00
TI1424100471		15-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032505	35.0000	251.000	8,785.00	Pressmud	UP22AL5821	VERMA BIO & AGRO SERVICES	9,225.00
TI1424100472		15-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032506	35.0000	278.250	9,738.75	Pressmud	UP22S 7026	VERMA BIO & AGRO SERVICES	10,225.00
TI1424100473		15-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032507	35.0000	266.650	9,332.75	Pressmud	UP25BZ 1592	VERMA BIO & AGRO SERVICES	9,799.00

TI1424100474		15-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032508	35.0000	267.950	9,378.25	Pressmud	UP22AR 0605	VERMA BIO & AGRO SERVICES	9,640.00
TI1424100475		15-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032509	35.0000	253.500	8,872.50	Pressmud	UP22W7258	VERMA BIO & AGRO SERVICES	9,121.00
TI1424100476		15-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032510	35.0000	280.600	9,821.00	Pressmud	UP25BS8467	VERMA BIO & AGRO SERVICES	10,313.00
TI1424100477		15-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032511	35.0000	260.800	9,128.00	Pressmud	UP16AQ 8670	VERMA BIO & AGRO SERVICES	9,584.00
TI1424100478		16-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032512	35.0000	213.800	7,483.00	Pressmud	UP21BU 6380	VERMA BIO & AGRO SERVICES	7,857.00
TI1424100479		16-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032513	35.0000	279.700	9,789.50	Pressmud	UP22AL 1314	VERMA BIO & AGRO SERVICES	10,280.00
TI1424100543		21-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032577	35.0000	257.550	9,014.25	Pressmud	UP16AQ 8670	VERMA BIO & AGRO SERVICES	9,464.00
TI1424100544		21-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032578	35.0000	277.600	9,716.00	Pressmud	UP22AL 1314	VERMA BIO & AGRO SERVICES	10,202.00
TI1424100545		21-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032579	35.0000	264.750	9,266.25	Pressmud	UP22AL 5821	VERMA BIO& AGRO SERVICES	9,730.00
TI1424100546		21-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032580	35.0000	271.300	9,495.50	Pressmud	UP22AY 0440	VERMA BIO& AGRO SERVICES	9,970.00
TI1424100547		21-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032581	35.0000	259.050	9,066.75	Pressmud	UP22BD 5425	VERMA BIO & AGRO SERVICES	9,521.00
TI1424100548		21-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032582	35.0000	265.250	9,283.75	Pressmud	UP22S 7026	VERMA BIO& AGRO SERVICES	9,748.00
TI1424100549		21-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032583	35.0000	269.700	9,439.50	Pressmud	UP22AR 0605	VERMA BIO & AGRO SERVICES	9,912.00
TI1424100550		21-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032584	35.0000	210.100	7,353.50	Pressmud	UK07AF 8995	VERMA BIO & AGRO SERVICES	7,722.00
TI1424100551		22-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032585	35.0000	257.700	9,019.50	Pressmud	UP25BS 8467	VERMA BIO & AGRO SERVICES	9,472.00
TI1424100552		22-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032586	35.0000	233.650	8,177.75	Pressmud	UP25DR 6572	VERMA BIO & AGRO SERVICES	8,586.00
TI1424100553		22-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032587	35.0000	287.750	10,071.25	Pressmud	UP25BV 6517	VERMA BIO & AGRO SERVICES	10,575.00
TI1424100554		22-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032588	35.0000	255.550	8,944.25	Pressmud	UP25DZ 1592	VERMA BIO & AGRO SERVICES	9,392.00
TI1424100555		22-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032589	35.0000	243.850	8,534.75	Pressmud	UP22AK 5216	VERMA BIO & AGRO SERVICES	8,961.00
TI1424100556		22-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032590	35.0000	213.150	7,460.25	Pressmud	UP21BU 6380	VERMA BIO & AGRO SERVICES	7,834.00
TI1424100557		22-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032591	35.0000	254.750	8,916.25	Pressmud	UP16AQ 8670	VERMA BIO & AGRO SERVICES	9,362.00
TI1424100558		22-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032592	35.0000	282.250	9,878.75	Pressmud	UP22AL 1314	VERMA BIO & AGRO SERVICES	10,373.00
TI1424100559		22-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032593	35.0000	249.700	8,739.50	Pressmud	UP22W 7258	VERMA BIO & AGRO SERVICES	9,178.00
TI1424100560		22-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032594	35.0000	247.900	8,676.50	Pressmud	UP22AL 5821	VERMA BIO & AGRO SERVICES	9,111.00
TI1424100561		22-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032595	35.0000	256.950	8,993.25	Pressmud	UP22AY 0440	VERMA BIO &AGRO SERVICES	9,443.00
TI1424100563		22-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032597	35.0000	272.700	9,544.50	Pressmud	UP22BD 5425	VERMA BIO &AGRO SERVICES	10,023.00
TI1424100564		22-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032598	35.0000	296.050	10,361.75	Pressmud	UP22AR 0605	VERMA BIO &AGRO SERVICES	10,880.00
TI1424100565		22-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032599	35.0000	228.150	7,985.25	Pressmud	UK07AF 8995	VERMA BIO & AGRO SERVICES	8,385.00
TI1424100566		23-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032600	35.0000	229.250	8,023.75	Pressmud	UP21BU 6380	VERMA BIO & AGRO SERVICES	8,426.00
TI1424100567		23-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032601	35.0000	245.700	8,599.50	Pressmud	UP22AK 5216	VERMA BIO & AGRO SERVICES	9,030.00
TI1424100568		23-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032602	35.0000	294.750	10,316.25	Pressmud	UP25BS 8467	VERMA BIO & AGRO SERVICES	10,832.00
TI1424100569		23-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032603	35.0000	261.450	9,150.75	Pressmud	UP22W 7258	VERMA BIO & AGRO SERVICES	9,609.00
TI1424100570		23-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032604	35.0000	260.650	9,122.75	Pressmud	UP16AQ 8670	VERMA BIO & AGRO SERVICES	9,579.00
TI1424100571		23-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032605	35.0000	261.250	9,143.75	Pressmud	UP25DZ 1592	VERMA BIO & AGRO SERVICES	9,602.00
TI1424100572		23-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032606	35.0000	247.350	8,657.25	Pressmud	UP25DR 6572	VERMA BIO & AGRO SERVICES	9,089.00
TI1424100573		23-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032607	35.0000	307.450	10,760.75	Pressmud	UP25BV 6517	VERMA BIO & AGRO SERVICES	11,299.00
TI1424100542		21-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032576	35.0000	269.200	9,422.00	Pressmud	UP25BS 8467	VERMA BIO & AGRO SERVICES	9,894.00
TI1424100511		18-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032545	35.0000	225.550	7,894.25	Pressmud	UK07AF 8995	VERMA BIO & AGRO SERVICES	8,288.00
TI1424100512		19-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032546	35.0000	284.900	9,971.50	Pressmud	UP25BS 8467	VERMA BIO & AGRO SERVICES	10,470.00
TI1424100513		19-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032547	35.0000	244.250	8,548.75	Pressmud	UP22W 7258	VERMA BIO & AGRO SERVICES	8,977.00
TI1424100514		19-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032548	35.0000	213.850	7,484.75	Pressmud	UP21BU 6380	VERMA BIO & AGRO SERVICES	7,859.00
TI1424100515		19-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032549	35.0000	226.950	7,943.25	Pressmud	UP22AK 5216	VERMA BIO & AGRO SERVICES	8,341.00
TI1424100516		19-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032550	35.0000	240.600	8,421.00	Pressmud	UP16AQ 8670	VERMA BIO & AGRO SERVICES	8,843.00
TI1424100517		19-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032551	35.0000	277.500	9,712.50	Pressmud	UP22AL 1314	VERMA BIO & AGRO SERVICES	10,199.00
TI1424100518		19-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032552	35.0000	260.400	9,114.00	Pressmud	UP25DZ 1592	VERMA BIO & AGRO SERVICES	9,570.00
TI1424100519		19-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032553	35.0000	237.900	8,326.50	Pressmud	UP25DR 6572	VERMA BIO& AGRO SERVICES	8,743.00
TI1424100520		19-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032554	35.0000	268.700	9,404.50	Pressmud	UP22S 7026	VERMA BIO & AGRO SERVICES	9,875.00
TI1424100521		19-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032555	35.0000	268.250	9,388.75	Pressmud	UP22BD 5425	VERMA BIO & AGRO SERVICES	9,859.00
TI1424100522		19-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032556	35.0000	284.900	9,971.50	Pressmud	UP22AR 0605	VERMA BIO & AGRO SERVICES	10,470.00
TI1424100523		19-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032557	35.0000	213.050	7,456.75	Pressmud	UK07AF 8995	VERMA BIO & AGRO SERVICES	7,829.00
TI1424100524		20-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032558	35.0000	220.300	7,710.50	Pressmud	UP21BU 6380	VERMA BIO & AGRO SERVICES	8,097.00
TI1424100525		20-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032559	35.0000	290.550	10,169.25	Pressmud	UP25BS 8467	VERMA BIO & AGRO SERVICES	10,677.00
TI1424100526		20-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032560	35.0000	257.800	9,023.00	Pressmud	UP22W 7258	VERMA BIO & AGRO SERVICES	9,475.00
TI1424100527		20-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032561	35.0000	236.600	8,281.00	Pressmud	UP22AK 5216	VERMA BIO & AGRO SERVICES	8,695.00
TI1424100528		20-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032562	35.0000	267.700	9,369.50	Pressmud	UP16AQ 8670	VERMA BIO & AGRO SERVICES	9,838.00
TI1424100529		20-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032563	35.0000	300.850	10,529.75	Pressmud	UP22AL 1314	VERMA BIO & AGRO SERVICES	11,056.00
TI1424100530		20-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032564	35.0000	278.350	9,742.25	Pressmud	UP22AL 5821	VERMA BIO & AGRO SERVICES	10,230.00
TI1424100531		20-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032565	35.0000	261.350	9,147.25	Pressmud	UP25BV 6517	VERMA BIO& AGRO SERVICES	9,605.00
TI1424100532		20-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032566	35.0000	267.300	9,355.50	Pressmud	UP22AY 0440	VERMA BIO &AGRO SERVICES	9,824.00
TI1424100533		20-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032567	35.0000	264.500	9,257.50	Pressmud	UP25DZ 1592	VERMA BIO & AGRO SERVICES	9,720.00
TI1424100534		20-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032568	35.0000	241.650	8,457.75	Pressmud	UP25DR 6572	VERMA BIO & AGRO SERVICES	8,880.00

TI1424100535		20-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032569	35.0000	274.600	9,611.00	Pressmud	UP22AR 0605	VERMA BIO & AGRO SERVICES	10,090.00
TI1424100537		20-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032571	35.0000	271.950	9,518.25	Pressmud	UP22S 7026	VERMA BIO & AGRO SERVICES	9,994.00
TI1424100538		20-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032572	35.0000	266.350	9,322.25	Pressmud	UP22BD 5425	VERMA BIO & AGRO SERVICES	9,788.00
TI1424100539		20-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032573	35.0000	218.900	7,661.50	Pressmud	UK07AF 8995	VERMA BIO & AGRO SERVICES	8,046.00
TI1424100540		21-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032574	35.0000	237.150	8,300.25	Pressmud	UP22AK 5216	VERMA BIO & AGRO SERVICES	8,716.00
TI1424100541		21-11-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032575	35.0000	207.850	7,274.75	Pressmud	UP21BU 6380	VERMA BIO & AGRO SERVICES	7,639.00
TI1424101006		15-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033033	35.0000	257.950	9,028.25	Pressmud	UP22BD 5425	VERMA BIO & AGRO SERVICES	9,480.00
TI1424101007		15-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033034	35.0000	258.150	9,035.25	Pressmud	UP22S 7026	VERMA BIO & AGRO SERVICES	9,487.00
TI1424101008		15-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033035	35.0000	265.500	9,292.50	Pressmud	UP22AR 0605	VERMA BIO & AGRO SERVICES	9,757.00
TI1424101009		15-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033036	35.0000	194.850	6,819.75	Pressmud	UK07AF 8995	VERMA BIO & AGRO SERVICES	7,162.00
TI1424101010		16-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033037	35.0000	266.600	9,331.00	Pressmud	UP25BS 8467	VERMA BIO & AGRO SERVICES	9,797.00
TI1424101011		16-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033038	35.0000	217.100	7,598.50	Pressmud	UP21BU 6380	VERMA BIO & AGRO SERVICES	7,979.00
TI1424101012		16-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033039	35.0000	225.500	7,892.50	Pressmud	UP22AK 5216	VERMA BIO & AGRO SERVICES	8,287.00
TI1424101013		16-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033040	35.0000	232.350	8,132.25	Pressmud	UP22W 7258	VERMA BIO & AGRO SERVICES	8,538.00
TI1424101014		16-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033041	35.0000	249.750	8,741.25	Pressmud	UP16AQ 8670	VERMA BIO & AGRO SERVICES	9,179.00
TI1424101015		16-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033042	35.0000	254.100	8,893.50	Pressmud	UP25DZ 1592	VERMA BIO& AGRO SERVICES	9,338.00
TI1424101016		16-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033043	35.0000	286.700	10,034.50	Pressmud	UP22AL 1314	VERMA BIO& AGRO SERVICES	10,537.00
TI1424101017		16-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033044	35.0000	271.850	9,514.75	Pressmud	UP25DU 6517	VERMA BIO& AGRO SERVICES	9,991.00
TI1424101018		16-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033045	35.0000	236.550	8,279.25	Pressmud	UP22AN 1353	VERMA BIO & AGRO SERVICES	8,693.00
TI1424101019		16-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033046	35.0000	275.300	9,635.50	Pressmud	UP22BD 5425	VERMA BIO & AGRO SERVICES	10,118.00
TI1424101020		16-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033047	35.0000	288.150	10,085.25	Pressmud	UP22S 7026	VERMA BIO & AGRO SERVICES	10,589.00
TI1424101021		17-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033048	35.0000	292.050	10,221.75	Pressmud	UP22AR 0605	VERMA BIO & AGRO SERVICES	10,734.00
TI1424101022		17-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033049	35.0000	232.400	8,134.00	Pressmud	UK07AF 8995	VERMA BIO & AGRO SERVICES	8,540.00
TI1424101023		17-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033050	35.0000	256.250	8,968.75	Pressmud	UP25BS 8467	VERMA BIO & AGRO SERVICES	9,417.00
TI1424101024		17-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033051	35.0000	258.250	9,038.75	Pressmud	UP22W 7258	VERMA BIO & AGRO SERVICES	9,491.00
TI1424101025		17-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033052	35.0000	267.200	9,352.00	Pressmud	UP22AY 0440	VERMA BIO & AGRO SERVICES	9,820.00
TI1424101026		17-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033053	35.0000	248.100	8,683.50	Pressmud	UP22AK 5216	VERMA BIO & AGRO SERVICES	9,118.00
TI1424101027		17-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033054	35.0000	228.950	8,013.25	Pressmud	UP21BU 6380	VERMA BIO & AGRO SERVICES	8,413.00
TI1424101028		17-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033055	35.0000	277.650	9,717.75	Pressmud	UP22AQ 8670	VERMA BIO & AGRO SERVICES	10,204.00
TI1424101029		17-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033056	35.0000	256.500	8,977.50	Pressmud	UP25DZ 1592	VERMA BIO& AGRO SERVICES	9,426.00
TI1424101031		17-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033058	35.0000	292.850	10,249.75	Pressmud	UP22AL 1314	VERMA BIO& AGRO SERVICES	10,762.00
TI1424101032		17-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033059	35.0000	268.100	9,383.50	Pressmud	UP22BD 5425	VERMA BIO & AGRO SERVICES	9,854.00
TI1424101033		17-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033060	35.0000	282.550	9,889.25	Pressmud	UP22S 7026	VERMA BIO & AGRO SERVICES	10,383.00
TI1424101034		17-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033061	35.0000	245.650	8,597.75	Pressmud	UP22AN 1353	VERMA BIO & AGRO SERVICES	9,028.00
TI1424101035		17-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033062	35.0000	294.350	10,302.25	Pressmud	UP25DU 6517	VERMA BIO & AGRO SERVICES	10,818.00
TI1424101036		17-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033063	35.0000	268.700	9,404.50	Pressmud	UP22AL 5821	VERMA BIO & AGRO SERVICES	9,875.00
TI1424101005		15-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033032	35.0000	266.000	9,310.00	Pressmud	UP22AY 0440	VERMA BIO & AGRO SERVICES	9,776.00
TI1424100973		13-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033000	35.0000	274.200	9,597.00	Pressmud	UP16AQ 8670	VERMA BIO & AGRO SERVICES	10,077.00
TI1424100974		13-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033001	35.0000	214.500	7,507.50	Pressmud	UP21BU 6380	VERMA BIO & AGRO SERVICES	7,884.00
TI1424100975		13-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033002	35.0000	301.450	10,550.75	Pressmud	UP25DU 6517	VERMA BIO & AGRO SERVICES	11,079.00
TI1424100976		13-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033003	35.0000	282.200	9,877.00	Pressmud	UP22AR 0605	VERMA BIO & AGRO SERVICES	10,371.00
TI1424100978		13-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033005	35.0000	252.800	8,848.00	Pressmud	UP22BS 8467	VERMA BIO & AGRO SERVICES	9,290.00
TI1424100979		13-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033006	35.0000	253.100	8,858.50	Pressmud	UP22BD 5425	VERMA BIO & AGRO SERVICES	9,301.00
TI1424100980		13-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033007	35.0000	264.350	9,252.25	Pressmud	UP22S 7026	VERMA BIO & AGRO SERVICES	9,714.00
TI1424100981		13-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033008	35.0000	209.100	7,318.50	Pressmud	UK07 AF 8995	VERMA BIO & AGRO SERVICES	7,685.00
TI1424100982		14-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033009	35.0000	218.000	7,630.00	Pressmud	UP21BU 6380	VERMA BIO & AGRO SERVICES	8,012.00
TI1424100983		14-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033010	35.0000	228.050	7,981.75	Pressmud	UP22AK 5216	VERMA BIO & AGRO SERVICES	8,382.00
TI1424100984		14-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033011	35.0000	262.350	9,182.25	Pressmud	UP25DZ 1592	VERMA BIO & AGRO SERVICES	9,642.00
TI1424100985		14-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033012	35.0000	241.600	8,456.00	Pressmud	UP22W 7258	VERMA BIO & AGRO SERVICES	8,878.00
TI1424100986		14-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033013	35.0000	262.300	9,180.50	Pressmud	UP16AQ 8670	VERMA BIO & AGRO SERVICES	9,641.00
TI1424100987		14-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033014	35.0000	263.350	9,217.25	Pressmud	UP22AL 1314	VERMA BIO & AGRO SERVICES	9,677.00
TI1424100988		14-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033015	35.0000	279.250	9,773.75	Pressmud	UP25DU 6517	VERMA BIO& AGRO SERVICES	10,262.00
TI1424100989		14-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033016	35.0000	263.900	9,236.50	Pressmud	UP22AY 0440	VERMA BIO & AGRO SERVICES	9,699.00
TI1424100991		14-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033018	35.0000	236.550	8,279.25	Pressmud	UP22AN 1353	VERMA BIO & AGRO SERVICES	8,693.00
TI1424100992		14-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033019	35.0000	275.050	9,626.75	Pressmud	UP22BD 5425	VERMA BIO & AGRO SERVICES	10,109.00
TI1424100993		14-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033020	35.0000	281.350	9,847.25	Pressmud	UP22S 7026	VERMA BIO & AGRO SERVICES	10,339.00
TI1424100994		14-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033021	35.0000	279.350	9,777.25	Pressmud	UP22AR 0605	VERMA BIO& AGRO SERVICES	10,265.00
TI1424100995		15-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033022	35.0000	213.450	7,470.75	Pressmud	UK07AF 8995	VERMA BIO & AGRO SERVICES	7,845.00
TI1424100996		15-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033023	35.0000	221.050	7,736.75	Pressmud	UP21BU 6380	VERMA BIO & AGRO SERVICES	8,123.00
TI1424100997		15-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033024	35.0000	238.650	8,352.75	Pressmud	UP22AK 5216	VERMA BIO & AGRO SERVICES	8,771.00
TI1424100998		15-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033025	35.0000	262.250	9,178.75	Pressmud	UP25DZ 1592	VERMA BIO & AGRO SERVICES	9,637.00

TI1424100999		15-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033026	35.0000	259.500	9,082.50	Pressmud	UP16AQ 8670	VERMA BIO & AGRO SERVICES	9,538.00
TI1424101000		15-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033027	35.0000	259.400	9,079.00	Pressmud	UP22W 7258	VERMA BIO & AGRO SERVICES	9,538.00
TI1424101001		15-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033028	35.0000	285.000	9,975.00	Pressmud	UP25DU 6517	VERMA BIO & AGRO SERVICES	10,473.00
TI1424101002		15-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033029	35.0000	220.350	7,712.25	Pressmud	UP22AN 1353	VERMA BIO & AGRO SERVICES	8,098.00
TI1424101003		15-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033030	35.0000	280.700	9,824.50	Pressmud	UP22AL 1314	VERMA BIO & AGRO SERVICES	10,317.00
TI1424101004		15-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033031	35.0000	273.300	9,565.50	Pressmud	UP25BS 8467	VERMA BIO & AGRO SERVICES	10,044.00
TI1424101073		20-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033100	35.0000	276.650	9,682.75	Pressmud	UP22AR 0605	VERMA BIO & AGRO SERVICES	10,167.00
TI1424101074		21-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033101	35.0000	209.300	7,325.50	Pressmud	UK07AF8995	VERMA BIO & AGRO SERVICES	7,692.00
TI1424101075		21-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033102	35.0000	249.550	8,734.25	Pressmud	UP22AK5216	VERMA BIO & AGRO SERVICES	9,170.00
TI1424101076		21-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033103	35.0000	218.450	7,645.75	Pressmud	UP21BU6380	VERMA BIO& AGRO SERVICES	8,028.00
TI1424101077		21-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033104	35.0000	268.950	9,413.25	Pressmud	UP25BS 8467	VERMA BIO & AGRO SERVICES	9,883.00
TI1424101078		21-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033105	35.0000	256.000	8,960.00	Pressmud	UP25DZ1592	VERMA BIO & AGRO SERVICES	9,408.00
TI1424101089		22-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033116	35.0000	246.800	8,638.00	Pressmud	UP22AN1353	VERMA BIO & AGRO SERVICES	9,070.00
TI1424101090		22-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033117	35.0000	259.950	9,098.25	Pressmud	UP16AQ 8670	VERMA BIO & AGRO SERVICES	9,552.00
TI1424101091		22-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033118	35.0000	247.050	8,646.75	Pressmud	UP22W 7258	VERMA BIO & AGRO SERVICES	9,079.00
TI1424101092		22-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033119	35.0000	295.850	10,354.75	Pressmud	UP22AL1314	VERMA BIO & AGRO SERVICES	10,873.00
TI1424101095		22-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033122	35.0000	309.750	10,841.25	Pressmud	UP25DU6517	VERMA BIO & AGRO SERVICES	11,383.00
TI1424101098		22-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033125	35.0000	245.500	8,592.50	Pressmud	UP22AL5821	VERMA BIO & AGRO SERVICES	9,023.00
TI1424101109		22-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033136	35.0000	280.750	9,826.25	Pressmud	UP22AY0440	VERMA BIO & AGRO SERVICES	10,318.00
TI1424101110		23-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033137	35.0000	265.700	9,299.50	Pressmud	UP22BD5425	VERMA BIO & AGRO SERVICES	9,766.00
TI1424101111		23-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033138	35.0000	271.500	9,502.50	Pressmud	UP22S 7026	VERMA BIO & AGRO SERVICES	9,979.00
TI1424101112		23-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033139	35.0000	285.700	9,999.50	Pressmud	UP22AR 0605	VERMA BIO & AGRO SERVICES	10,500.00
TI1424101113		23-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033140	35.0000	226.100	7,913.50	Pressmud	UK07AF 8995	VERMA BIO & AGRO SERVICES	8,310.00
TI1424101114		23-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033141	35.0000	260.900	9,131.50	Pressmud	UP22W 7258	VERMA BIO & AGRO SERVICES	9,588.00
TI1424101127		23-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033154	35.0000	223.950	7,838.25	Pressmud	UP22AN 1353	VERMA BIO & AGRO SERVICES	8,230.00
TI1424101128		24-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033155	35.0000	237.450	8,310.75	Pressmud	UP22AK 5216	VERMA BIO & AGRO SERVICES	8,727.00
TI1424101129		24-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033156	35.0000	213.800	7,483.00	Pressmud	UP21BU 6380	VERMA BIO & AGRO SERVICES	7,857.00
TI1424101130		24-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033157	35.0000	241.450	8,450.75	Pressmud	UP25BS 8467	VERMA BIO & AGRO SERVICES	8,873.00
TI1424101131		24-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033158	35.0000	281.350	9,847.25	Pressmud	UP25DU 6517	VERMA BIO & AGRO SERVICES	10,339.00
TI1424101132		24-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033159	35.0000	260.300	9,110.50	Pressmud	UP25DZ 1592	VERMA BIO & AGRO SERVICES	9,567.00
TI1424101136		24-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033163	35.0000	287.850	10,074.75	Pressmud	UP22AL 1314	VERMA BIO & AGRO SERVICES	10,579.00
TI1424101150		24-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033177	35.0000	257.400	9,009.00	Pressmud	UP22AL 5821	VERMA BIO & AGRO SERVICES	9,459.00
TI1424101151		25-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033178	35.0000	259.800	9,093.00	Pressmud	UP22BD5425	VERMA BIO & AGRO SERVICES	9,547.00
TI1424101152		25-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033179	35.0000	270.000	9,450.00	Pressmud	UP22S 7026	VERMA BIO & AGRO SERVICES	9,922.00
TI1424101153		25-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033180	35.0000	279.700	9,789.50	Pressmud	UP22AR0605	VERMA BIO & AGRO SERVICES	10,280.00
TI1424101154		25-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033181	35.0000	214.400	7,504.00	Pressmud	UK07AF 8995	VERMA BIO & AGRO SERVICES	7,880.00
TI1424101071		20-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033098	35.0000	277.150	9,700.25	Pressmud	UP22S 7026	VERMA BIO & AGRO SERVICES	10,186.00
TI1424101037		18-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033064	35.0000	276.200	9,667.00	Pressmud	UP22AR 0605	VERMA BIO & AGRO SERVICES	10,151.00
TI1424101038		18-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033065	35.0000	269.050	9,416.75	Pressmud	UP22AY 0440	VERMA BIO & AGRO SERVICES	9,887.00
TI1424101039		18-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033066	35.0000	218.700	7,654.50	Pressmud	UK07AF 8995	VERMA BIO & AGRO SERVICES	8,037.00
TI1424101040		18-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033067	35.0000	247.650	8,667.75	Pressmud	UP22W 7258	VERMA BIO & AGRO SERVICES	9,102.00
TI1424101041		18-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033068	35.0000	250.100	8,753.50	Pressmud	UP25BS 8467	VERMA BIO & AGRO SERVICES	9,192.00
TI1424101042		18-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033069	35.0000	234.200	8,197.00	Pressmud	UP22AK 5216	VERMA BIO & AGRO SERVICES	8,607.00
TI1424101043		18-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033070	35.0000	211.400	7,399.00	Pressmud	UP21BU 6380	VERMA BIO & AGRO SERVICES	7,769.00
TI1424101044		18-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033071	35.0000	256.650	8,982.75	Pressmud	UP25DZ 1592	VERMA BIO & AGRO SERVICES	9,433.00
TI1424101046		18-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033073	35.0000	286.800	10,038.00	Pressmud	UP22AL 1314	VERMA BIO& AGRO SERVICES	10,540.00
TI1424101047		18-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033074	35.0000	251.950	8,818.25	Pressmud	UP16AQ 8670	VERMA BIO & AGRO SERVICES	9,258.00
TI1424101048		18-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033075	35.0000	253.300	8,865.50	Pressmud	UP22AL 5821	VERMA BIO & AGRO SERVICES	9,310.00
TI1424101049		19-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033076	35.0000	264.900	9,271.50	Pressmud	UP22S 7026	VERMA BIO & AGRO SERVICES	9,736.00
TI1424101050		19-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033077	35.0000	254.750	8,916.25	Pressmud	UP22BD5425	VERMA BIO & AGRO SERVICES	9,362.00
TI1424101051		19-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033078	35.0000	227.050	7,946.75	Pressmud	UP22AN 1353	VERMA BIO & AGRO SERVICES	8,345.00
TI1424101052		19-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033079	35.0000	284.200	9,947.00	Pressmud	UP25DU 6517	VERMA BIO & AGRO SERVICES	10,445.00
TI1424101053		19-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033080	35.0000	262.900	9,201.50	Pressmud	UP22AY 0440	VERMA BIO & AGRO SERVICES	9,662.00
TI1424101054		19-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033081	35.0000	270.300	9,460.50	Pressmud	UP22AR 0605	VERMA BIO & AGRO SERVICES	9,935.00
TI1424101055		19-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033082	35.0000	214.600	7,511.00	Pressmud	UK07AF 8995	VERMA BIO& AGRO SERVICES	7,887.00
TI1424101056		19-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033083	35.0000	256.050	8,961.75	Pressmud	UP22W 7258	VERMA BIO& AGRO SERVICES	9,410.00
TI1424101057		19-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033084	35.0000	248.250	8,688.75	Pressmud	UP25BS 8467	VERMA BIO& AGRO SERVICES	9,123.00
TI1424101058		19-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033085	35.0000	224.750	7,866.25	Pressmud	UP21BU 6380	VERMA BIO & AGRO SERVICES	8,260.00
TI1424101059		19-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033086	35.0000	238.400	8,344.00	Pressmud	UP22AK 5216	VERMA BIO & AGRO SERVICES	8,762.00
TI1424101060		19-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033087	35.0000	269.550	9,434.25	Pressmud	UP16AQ 8670	VERMA BIO & AGRO SERVICES	9,906.00
TI1424101061		20-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033088	35.0000	289.450	10,130.75	Pressmud	UP22AL 1314	VERMA BIO & AGRO SERVICES	10,637.00

TI1424101062		20-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033089	35.0000	272.350	9,532.25	Pressmud	UP25DZ 1592	VERMA BIO & AGRO SERVICES	10,600.00
TI1424101063		20-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033090	35.0000	305.100	10,678.50	Pressmud	UP25DU 6517	VERMA BIO & AGRO SERVICES	11,880.00
TI1424101064		20-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033091	35.0000	241.250	8,443.75	Pressmud	UP22AN 1353	VERMA BIO & AGRO SERVICES	8,866.00
TI1424101065		20-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033092	35.0000	288.000	10,080.00	Pressmud	UP22AL 5821	VERMA BIO & AGRO SERVICES	10,584.00
TI1424101066		20-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033093	35.0000	285.150	9,980.25	Pressmud	UP22AY 0440	VERMA BIO& AGRO SERVICES	10,480.00
TI1424101067		20-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140033094	35.0000	263.650	9,227.75	Pressmud	UP22BD 5425	VERMA BIO & AGRO SERVICES	9,690.00
TI1424100972		13-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032999	35.0000	225.950	7,908.25	Pressmud	UP22AK 5216	VERMA BIO & AGRO SERVICES	8,304.00
TI1424100833		06-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032860	35.0000	229.750	8,041.25	Pressmud	UP22AK 5216	VERMA BIO & AGRO SERVICES	8,443.00
TI1424100834		06-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032861	35.0000	220.950	7,733.25	Pressmud	UP21BU 6380	VERMA BIO & AGRO SERVICES	8,119.00
TI1424100835		06-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032862	35.0000	264.500	9,257.50	Pressmud	UP16AQ 8670	VERMA BIO & AGRO SERVICES	9,720.00
TI1424100836		06-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032863	35.0000	281.900	9,866.50	Pressmud	UP22AL 1314	VERMA BIO & AGRO SERVICES	10,361.00
TI1424100837		06-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032864	35.0000	296.500	10,377.50	Pressmud	UP25DU 6517	VERMA BIO & AGRO SERVICES	10,896.00
TI1424100839		06-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032866	35.0000	261.200	9,142.00	Pressmud	UP22AY 0440	VERMA BIO &AGRO SERVICES	9,600.00
TI1424100840		06-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032867	35.0000	261.150	9,140.25	Pressmud	UP22AL 5821	VERMA BIO& AGRO SERVICES	9,598.00
TI1424100842		06-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032869	35.0000	216.800	7,588.00	Pressmud	UP22AN 1353	VERMA BIO& AGRO SERVICES	7,968.00
TI1424100851		06-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032878	35.0000	265.100	9,278.50	Pressmud	UP22BD 5425	VERMA BIO& AGRO SERVICES	9,743.00
TI1424100856		06-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032883	35.0000	291.150	10,190.25	Pressmud	UP22S 7026	VERMA BIO & AGRO SERVICES	10,700.00
TI1424100858		06-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032885	35.0000	292.800	10,248.00	Pressmud	UP22AR 0605	VERMA BIO& AGRO SERVICES	10,760.00
TI1424100864		06-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032891	35.0000	223.800	7,833.00	Pressmud	UK07AF 8995	VERMA BIO & AGRO SERVICES	8,225.00
TI1424100865		07-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032892	35.0000	263.300	9,215.50	Pressmud	UP22W 7258	VERMA BIO & AGRO SERVICES	9,676.00
TI1424100866		07-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032893	35.0000	288.400	10,094.00	Pressmud	UP25BS 8467	VERMA BIO & AGRO SERVICES	10,598.00
TI1424100867		07-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032894	35.0000	233.000	8,155.00	Pressmud	UP22AK 5216	VERMA BIO & AGRO SERVICES	8,563.00
TI1424100868		07-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032895	35.0000	221.350	7,747.25	Pressmud	UP21BU 6380	VERMA BIO & AGRO SERVICES	8,135.00
TI1424100869		07-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032896	35.0000	272.200	9,527.00	Pressmud	UP25DZ 1592	VERMA BIO & AGRO SERVICES	10,003.00
TI1424100870		07-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032897	35.0000	280.100	9,803.50	Pressmud	UP16AQ 8670	VERMA BIO & AGRO SERVICES	10,294.00
TI1424100871		07-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032898	35.0000	286.800	10,038.00	Pressmud	UP22AL 1314	VERMA BIO & AGRO SERVICES	10,540.00
TI1424100872		07-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032899	35.0000	270.750	9,476.25	Pressmud	UP22AL 5821	VERMA BIO & AGRO SERVICES	9,950.00
TI1424100873		07-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032900	35.0000	320.550	11,219.25	Pressmud	UP25DU 6517	VERMA BIO & AGRO SERVICES	11,779.00
TI1424100876		07-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032903	35.0000	272.200	9,527.00	Pressmud	UP22AY 0440	VERMA BIO & AGRO SERVICES	10,003.00
TI1424100877		07-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032904	35.0000	274.500	9,607.50	Pressmud	UP22BD 5425	VERMA BIO & AGRO SERVICES	10,088.00
TI1424100882		07-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032909	35.0000	292.050	10,221.75	Pressmud	UP22S 7026	VERMA BIO& AGRO SERVICES	10,734.00
TI1424100883		07-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032910	35.0000	239.450	8,380.75	Pressmud	UP22AN 1353	VERMA BIO & AGRO SERVICES	8,801.00
TI1424100884		08-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032911	35.0000	280.400	9,814.00	Pressmud	UP22AR 0605	VERMA BIO & AGRO SERVICES	10,304.00
TI1424100885		08-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032912	35.0000	263.600	9,226.00	Pressmud	UP22W 7258	VERMA BIO & AGRO SERVICES	9,688.00
TI1424100886		08-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032913	35.0000	212.650	7,442.75	Pressmud	UK07AF 8995	VERMA BIO & AGRO SERVICES	7,815.00
TI1424100887		08-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032914	35.0000	260.600	9,121.00	Pressmud	UP25BS 8467	VERMA BIO & AGRO SERVICES	9,577.00
TI1424100888		08-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032915	35.0000	233.200	8,162.00	Pressmud	UP22AK 5216	VERMA BIO & AGRO SERVICES	8,570.00
TI1424100832		06-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032859	35.0000	271.100	9,488.50	Pressmud	UP25DZ 1592	VERMA BIO & AGRO SERVICES	9,963.00
TI1424100773		03-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032800	35.0000	198.550	6,949.25	Pressmud	UK07AF 8995	VERMA BIO & AGRO SERVICES	7,297.00
TI1424100775		03-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032802	35.0000	249.050	8,716.75	Pressmud	UP22W 7258	VERMA BIO & AGRO SERVICES	9,153.00
TI1424100779		03-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032806	35.0000	255.900	8,956.50	Pressmud	UP25BS 8467	VERMA BIO &AGRO SERVICES	9,405.00
TI1424100786		03-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032813	35.0000	219.100	7,668.50	Pressmud	UP22AK 5216	VERMA BIO &AGRO SERVICES	8,053.00
TI1424100787		03-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032814	35.0000	213.450	7,470.75	Pressmud	UP21BU 6380	VERMA BIO &AGRO SERVICES	7,845.00
TI1424100791		04-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032818	35.0000	286.200	10,017.00	Pressmud	UP22AL 1314	VERMA BIO & AGRO SERVICES	10,517.00
TI1424100792		04-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032819	35.0000	258.550	9,049.25	Pressmud	UP25DZ 1592	VERMA BIO & AGRO SERVICES	9,501.00
TI1424100793		04-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032820	35.0000	264.800	9,268.00	Pressmud	UP16AQ 8670	VERMA BIO & AGRO SERVICES	9,732.00
TI1424100794		04-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032821	35.0000	280.350	9,812.25	Pressmud	UP22AY 0440	VERMA BIO & AGRO SERVICES	10,302.00
TI1424100795		04-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032822	35.0000	276.500	9,677.50	Pressmud	UP22AL 5821	VERMA BIO & AGRO SERVICES	10,162.00
TI1424100796		04-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032823	35.0000	257.450	9,010.75	Pressmud	UP22BD 5425	VERMA BIO & AGRO SERVICES	9,461.00
TI1424100797		04-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032824	35.0000	296.850	10,389.75	Pressmud	UP25DU 6517	VERMA BIO& AGRO SERVICES	10,910.00
TI1424100798		04-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032825	35.0000	255.500	8,942.50	Pressmud	UP22S7026	VERMA BIO& AGRO SERVICES	9,391.00
TI1424100802		04-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032829	35.0000	282.500	9,887.50	Pressmud	UP22AR 0605	VERMA BIO& AGRO SERVICES	10,382.00
TI1424100807		04-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032834	35.0000	205.500	7,192.50	Pressmud	UK07AF 8995	VERMA BIO& AGRO SERVICES	7,553.00
TI1424100811		05-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032838	35.0000	260.300	9,110.50	Pressmud	UP22W 7258	VERMA BIO & AGRO SERVICES	9,567.00
TI1424100812		05-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032839	35.0000	278.850	9,759.75	Pressmud	UP25DZ 1592	VERMA BIO & AGRO SERVICES	10,248.00
TI1424100813		05-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032840	35.0000	267.300	9,355.50	Pressmud	UP16AQ 8670	VERMA BIO & AGRO SERVICES	9,824.00
TI1424100814		05-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032841	35.0000	284.950	9,973.25	Pressmud	UP25BS 8467	VERMA BIO & AGRO SERVICES	10,471.00
TI1424100815		05-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032842	35.0000	231.250	8,093.75	Pressmud	UP22AK 5216	VERMA BIO & AGRO SERVICES	8,498.00
TI1424100816		05-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032843	35.0000	220.600	7,721.00	Pressmud	UP21BU 6380	VERMA BIO & AGRO SERVICES	8,107.00
TI1424100817		05-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032844	35.0000	296.800	10,388.00	Pressmud	UP22AL 1314	VERMA BIO & AGRO SERVICES	10,908.00
TI1424100818		05-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032845	35.0000	319.400	11,179.00	Pressmud	UP25DU6517	VERMA BIO & AGRO SERVICES	11,737.00

TI1424100819		05-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032846	35.0000	268.300	9,390.50	Pressmud	UP22AL 5821	VERMA BIO & AGRO SERVICES	9,661.00
TI1424100820		05-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032847	35.0000	262.900	9,201.50	Pressmud	UP22AY 0440	VERMA BIO & AGRO SERVICES	9,461.00
TI1424100821		05-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032848	35.0000	273.100	9,558.50	Pressmud	UP22BD 5425	VERMA BIO & AGRO SERVICES	10,037.00
TI1424100822		05-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032849	35.0000	287.050	10,046.75	Pressmud	UP22AR 0605	VERMA BIO& AGRO SERVICES	10,549.00
TI1424100826		05-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032853	35.0000	267.300	9,355.50	Pressmud	UP22S 7026	VERMA BIO & AGRO SERVICES	9,824.00
TI1424100829		05-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032856	35.0000	202.650	7,092.75	Pressmud	UK07AF 8995	VERMA BIO & AGRO SERVICES	7,447.00
TI1424100831		06-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032858	35.0000	257.350	9,007.25	Pressmud	UP22W 7258	VERMA BIO & AGRO SERVICES	9,457.00
TI1424100941		10-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032968	35.0000	251.200	8,792.00	Pressmud	UP16AQ 8670	VERMA BIO & AGRO SERVICES	9,232.00
TI1424100942		11-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032969	35.0000	262.600	9,191.00	Pressmud	UP25DZ 1592	VERMA BIO & AGRO SERVICES	9,651.00
TI1424100943		11-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032970	35.0000	262.050	9,171.75	Pressmud	UP22AL 5821	VERMA BIO & AGRO SERVICES	9,630.00
TI1424100944		11-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032971	35.0000	283.800	9,933.00	Pressmud	UP22AL 1314	VERMA BIO & AGRO SERVICES	10,429.00
TI1424100945		11-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032972	35.0000	206.300	7,220.50	Pressmud	UP22AN 1353	VERMA BIO & AGRO SERVICES	7,583.00
TI1424100946		11-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032973	35.0000	265.550	9,294.25	Pressmud	UP22AY 0440	VERMA BIO & AGRO SERVICES	9,758.00
TI1424100947		11-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032974	35.0000	272.400	9,534.00	Pressmud	UP22S 7026	VERMA BIO & AGRO SERVICES	10,010.00
TI1424100948		11-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032975	35.0000	255.000	8,925.00	Pressmud	UP22BD 5425	VERMA BIO & AGRO SERVICES	9,371.00
TI1424100949		11-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032976	35.0000	271.000	9,485.00	Pressmud	UP22AR 0605	VERMA BIO & AGRO SERVICES	9,959.00
TI1424100950		11-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032977	35.0000	265.700	9,299.50	Pressmud	UP25BS 8467	VERMA BIO & AGRO SERVICES	9,766.00
TI1424100951		11-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032978	35.0000	220.850	7,729.75	Pressmud	UK07AF 8995	VERMA BIO &AGRO SERVICES	8,116.00
TI1424100952		11-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032979	35.0000	235.900	8,256.50	Pressmud	UP22AK 5216	VERMA BIO & AGRO SERVICES	8,669.00
TI1424100953		11-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032980	35.0000	217.950	7,628.25	Pressmud	UP21BU 6380	VERMA BIO & AGRO SERVICES	8,010.00
TI1424100954		12-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032981	35.0000	260.850	9,129.75	Pressmud	UP16AQ 8670	VERMA BIO & AGRO SERVICES	9,586.00
TI1424100955		12-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032982	35.0000	311.100	10,888.50	Pressmud	UP25DU 6517	VERMA BIO & AGRO SERVICES	11,433.00
TI1424100956		12-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032983	35.0000	267.650	9,367.75	Pressmud	UP25DZ 1592	VERMA BIO & AGRO SERVICES	9,836.00
TI1424100957		12-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032984	35.0000	248.800	8,708.00	Pressmud	UP22W 7258	VERMA BIO & AGRO SERVICES	9,144.00
TI1424100958		12-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032985	35.0000	291.350	10,197.25	Pressmud	UP22AL 1314	VERMA BIO & AGRO SERVICES	10,707.00
TI1424100959		12-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032986	35.0000	265.750	9,301.25	Pressmud	UP22AL 5821	VERMA BIO & AGRO SERVICES	9,767.00
TI1424100960		12-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032987	35.0000	236.100	8,263.50	Pressmud	UP22AN 1353	VERMA BIO& AGRO SERVICES	8,678.00
TI1424100961		12-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032988	35.0000	274.850	9,619.75	Pressmud	UP22AY 0440	VERMA BIO & AGRO SERVICES	10,102.00
TI1424100963		12-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032990	35.0000	281.750	9,861.25	Pressmud	UP22AR 0605	VERMA BIO& AGRO SERVICES	10,355.00
TI1424100964		12-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032991	35.0000	272.950	9,553.25	Pressmud	UP22BD 5425	VERMA BIO& AGRO SERVICES	10,031.00
TI1424100965		12-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032992	35.0000	221.850	7,764.75	Pressmud	UK07AF 8995	VERMA BIO& AGRO SERVICES	8,153.00
TI1424100966		12-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032993	35.0000	261.200	9,142.00	Pressmud	UP25BS 8467	VERMA BIO& AGRO SERVICES	9,600.00
TI1424100967		12-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032994	35.0000	276.250	9,668.75	Pressmud	UP22S 7026	VERMA BIO& AGRO SERVICES	10,153.00
TI1424100968		13-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032995	35.0000	297.350	10,407.25	Pressmud	UP22AL 1314	VERMA BIO & AGRO SERVICES	10,927.00
TI1424100969		13-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032996	35.0000	275.150	9,630.25	Pressmud	UP25DZ 1592	VERMA BIO & AGRO SERVICES	10,112.00
TI1424100970		13-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032997	35.0000	229.850	8,044.75	Pressmud	UP22AN 1353	VERMA BIO & AGRO SERVICES	8,447.00
TI1424100971		13-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032998	35.0000	259.300	9,075.50	Pressmud	UP22W 7258	VERMA BIO & AGRO SERVICES	9,530.00
TI1424100940		10-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032967	35.0000	261.200	9,142.00	Pressmud	UP25DU 6517	VERMA BIO & AGRO SERVICES	9,600.00
TI1424100889		08-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032916	35.0000	218.600	7,651.00	Pressmud	UP21BU 6380	VERMA BIO & AGRO SERVICES	8,033.00
TI1424100890		08-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032917	35.0000	254.950	8,923.25	Pressmud	UP16AQ 8670	VERMA BIO & AGRO SERVICES	9,369.00
TI1424100891		08-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032918	35.0000	265.600	9,296.00	Pressmud	UP25DZ 1592	VERMA BIO & AGRO SERVICES	9,760.00
TI1424100892		08-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032919	35.0000	282.350	9,882.25	Pressmud	UP22AL 1314	VERMA BIO & AGRO SERVICES	10,376.00
TI1424100900		08-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032927	35.0000	274.900	9,621.50	Pressmud	UP22AT 5821	VERMA BIO & AGRO SERVICES	10,104.00
TI1424100904		08-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032931	35.0000	292.250	10,228.75	Pressmud	UP22AY 0440	VERMA BIO & AGRO SERVICES	10,741.00
TI1424100911		08-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032938	35.0000	309.400	10,829.00	Pressmud	UP25DU 6517	VERMA BIO & AGRO SERVICES	11,371.00
TI1424100912		09-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032939	35.0000	246.450	8,625.75	Pressmud	UP22AN 1353	VERMA BIO & AGRO SERVICES	9,058.00
TI1424100913		09-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032940	35.0000	276.050	9,661.75	Pressmud	UP22BD 5425	VERMA BIO & AGRO SERVICES	10,146.00
TI1424100914		09-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032941	35.0000	282.150	9,875.25	Pressmud	UP22AR 0605	VERMA BIO & AGRO SERVICES	10,369.00
TI1424100915		09-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032942	35.0000	271.650	9,507.75	Pressmud	UP22S 7026	VERMA BIO & AGRO SERVICES	9,984.00
TI1424100916		09-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032943	35.0000	212.850	7,449.75	Pressmud	UK07AF 8995	VERMA BIO & AGRO SERVICES	7,822.00
TI1424100917		09-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032944	35.0000	258.450	9,045.75	Pressmud	UP22W 7258	VERMA BIO & AGRO SERVICES	9,498.00
TI1424100918		09-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032945	35.0000	263.400	9,219.00	Pressmud	UP25BS 8467	VERMA BIO & AGRO SERVICES	9,679.00
TI1424100919		09-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032946	35.0000	222.600	7,791.00	Pressmud	UP21BU 6380	VERMA BIO & AGRO SERVICES	8,181.00
TI1424100939		10-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032966	35.0000	232.900	8,151.50	Pressmud	UP22AK 5216	VERMA BIO & AGRO SERVICES	8,560.00
TI1424100938		10-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032965	35.0000	256.650	8,982.75	Pressmud	UP25BS 8467	VERMA BIO& AGRO SERVICES	9,433.00
TI1424100937		10-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032964	35.0000	238.400	8,344.00	Pressmud	UP22W 7258	VERMA BIO & AGRO SERVICES	8,762.00
TI1424100936		10-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032963	35.0000	212.400	7,434.00	Pressmud	UK07AF 8995	VERMA BIO & AGRO SERVICES	7,806.00
TI1424100935		10-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032962	35.0000	276.350	9,672.25	Pressmud	UP22AR 0605	VERMA BIO& AGRO SERVICES	10,156.00
TI1424100934		10-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032961	35.0000	271.750	9,511.25	Pressmud	UP22S 7026	VERMA BIO & AGRO SERVICES	9,987.00
TI1424100933		10-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032960	35.0000	240.950	8,433.25	Pressmud	UP22AL 5821	VERMA BIO & AGRO SERVICES	8,855.00
TI1424100932		10-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032959	35.0000	210.150	7,355.25	Pressmud	UP22AN 1353	VERMA BIO & AGRO SERVICES	7,723.00

TI1424100922		09-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032949	35.0000	239.850	8,394.75	Pressmud	UP22AK 5216	VERMA BIO& AGRO SERVICES	8,613.00
TI1424100926		09-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032953	35.0000	245.800	8,603.00	Pressmud	UP16AQ 8670	VERMA BIO & AGRO SERVICES	8,838.00
TI1424100927		09-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032954	35.0000	261.400	9,149.00	Pressmud	UP25DZ 1592	VERMA BIO & AGRO SERVICES	9,607.00
TI1424100928		10-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032955	35.0000	320.850	11,229.75	Pressmud	UP25DU 6517	VERMA BIO & AGRO SERVICES	11,792.00
TI1424100931		10-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032958	35.0000	277.200	9,702.00	Pressmud	UP22AL 1314	VERMA BIO & AGRO SERVICES	10,188.00
TI1424100930		10-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032957	35.0000	261.500	9,152.50	Pressmud	UP22BD 5425	VERMA BIO & AGRO SERVICES	9,611.00
TI1424100929		10-12-2024	Verma Bio and Agro Services	Amroha	3050013815	PRESSMUD-2024-25	0140032956	35.0000	263.150	9,210.25	Pressmud	UP22AY 0440	VERMA BIO & AGRO SERVICES	9,670.00
			Verma Bio and Agro Services						######	########				########
TI1424101656		15-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033673	25.0000	122.600	3,065.00	Pressmud	UP25BN6844	KASHMIR BRIQUETTE	3,219.00
TI1424101657		15-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033674	25.0000	120.750	3,018.75	Pressmud	UP22AW3384	KASHMIR BRIQUETTE	3,169.00
TI1424101659		15-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033676	25.0000	82.150	2,053.75	Pressmud	HR71D9557	KASHMIR BRIQUETTE	2,156.00
TI1424101655		15-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033672	25.0000	190.350	4,758.75	Pressmud	UP25BW6195	KASHMIR BRIQUETTE	4,997.00
TI1424101654		15-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033671	25.0000	79.950	1,998.75	Pressmud	HR71D9557	KASHMIR BRIQUETTE	2,099.00
TI1424101653		15-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033670	25.0000	126.050	3,151.25	Pressmud	UP22AW3384	KASHMIR BRIQUETTE	3,309.00
TI1424101652		15-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033669	25.0000	125.150	3,128.75	Pressmud	UP25BN6844	KASHMIR BRIQUETTE	3,285.00
TI1424101660		15-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033677	25.0000	190.450	4,761.25	Pressmud	UP25BW6195	KASHMIR BRIQUETTE	4,999.00
TI1424101661		15-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033678	25.0000	120.050	3,001.25	Pressmud	UP25BN6844	KASHMIR BRIQUETTE	3,151.00
TI1424101664		15-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033681	25.0000	121.550	3,038.75	Pressmud	UP22AW3384	KASHMIR BRIQUETTE	3,191.00
TI1424101665		15-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033682	25.0000	79.550	1,988.75	Pressmud	HR71D9557	KASHMIR BRIQUETTE	2,089.00
TI1424101681		16-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033698	25.0000	171.550	4,288.75	Pressmud	UP25BW6195	KASHMIR BRIQUETTE	4,503.00
TI1424101682		16-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033699	25.0000	121.700	3,042.50	Pressmud	UP25BN6844	KASHMIR BRIQUETTE	3,195.00
TI1424101683		16-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033700	25.0000	119.950	2,998.75	Pressmud	UP22AW3384	KASHMIR BRIQUETTE	3,149.00
TI1424101650		15-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033667	25.0000	194.900	4,872.50	Pressmud	UP25BW6195	KASHMIR BRIQUETTE	5,117.00
TI1424101634		14-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033651	25.0000	82.650	2,066.25	Pressmud	HR71D9557	KASHMIR BRIQUETTE	2,170.00
TI1424101631		14-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033648	25.0000	123.250	3,081.25	Pressmud	UP22AW3384	KASHMIR BRIQUETTE	3,235.00
TI1424101630		14-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033647	25.0000	120.600	3,015.00	Pressmud	UP25BN6844	KASHMIR BRIQUETTE	3,165.00
TI1424101625		14-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033642	25.0000	76.250	1,906.25	Pressmud	AP22AF4605	KASHMIR BRIQUETTE	2,002.00
TI1424101622		14-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033639	25.0000	194.650	4,866.25	Pressmud	UP25BW6195	KASHMIR BRIQUETTE	5,110.00
TI1424101621		14-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033638	25.0000	126.550	3,163.75	Pressmud	UP22AW3384	KASHMIR BRIQUETTE	3,322.00
TI1424101620		14-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033637	25.0000	128.150	3,203.75	Pressmud	UP25BN6844	KASHMIR BRIQUETTE	3,364.00
TI1424101618		14-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033635	25.0000	74.200	1,855.00	Pressmud	AP22AF4605	KASHMIR BRIQUETTE	1,947.00
TI1424101617		14-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033634	25.0000	137.800	3,445.00	Pressmud	HR71D9557	KASHMIR BRIQUETTE	3,617.00
TI1424101616		14-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033633	25.0000	192.550	4,813.75	Pressmud	UP25BW6195	KASHMIR BRIQUETTE	5,054.00
TI1424101615		14-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033632	25.0000	123.600	3,090.00	Pressmud	UP22AW3384	KASHMIR BRIQUETTE	3,244.00
TI1424101614		14-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033631	25.0000	123.200	3,080.00	Pressmud	UP25BN6844	KASHMIR BRIQUETTE	3,234.00
TI1424101605		13-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033622	25.0000	72.750	1,818.75	Pressmud	AP22AF4605	KASHMIR BRIQUETTE	1,909.00
TI1424101769		18-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033786	25.0100	74.700	1,868.25	Pressmud	AP22AF4605	KSHMIR BRIQUETTE	1,962.00
TI1424101767		18-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033784	25.0000	119.700	2,992.50	Pressmud	UP25BN6844	KASHMIR BRIQUETTE	3,143.00
TI1424101765		18-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033782	25.0000	117.250	2,931.25	Pressmud	UP22AW3384	KASHMIR BRIQUETTE	3,077.00
TI1424101764		18-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033781	25.0000	71.550	1,788.75	Pressmud	AP22AF4605	KASHMIR BRIQUETTE	1,879.00
TI1424101763		18-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033780	25.0000	181.950	4,548.75	Pressmud	UP25BW6195	KASHMIR BRIQUETTE	4,777.00
TI1424101759		18-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033776	25.0000	131.950	3,298.75	Pressmud	HR71D9557	KASHMIR BRIQUETTE	3,463.00
TI1424101758		18-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033775	25.0000	120.950	3,023.75	Pressmud	UP22AW3384	KASHMIR BRIQUETTE	3,176.00
TI1424101756		18-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033773	25.0000	116.800	2,920.00	Pressmud	UP25BN6844	KASHMIR BRIQUETTE	3,066.00
TI1424101755		18-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033772	25.0000	73.950	1,848.75	Pressmud	AP22AF4605	KASHMIR BRIQUETTE	1,941.00
TI1424101753		18-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033770	25.0000	177.700	4,442.50	Pressmud	UP25BW6195	KASHMIR BRIQUETTE	4,665.00
TI1424101736		17-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033753	25.0000	139.550	3,488.75	Pressmud	HR71D9557	KASHMIR BRIQUETTE	3,663.00
TI1424101732		17-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033749	25.0000	124.500	3,112.50	Pressmud	UP22AW3384	KASHMIR BRIQUETTE	3,269.00
TI1424101729		17-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033746	25.0000	123.350	3,083.75	Pressmud	UP25BN6844	KASHMIR BRIQUETTE	3,238.00
TI1424101728		17-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033745	25.0100	75.700	1,893.26	Pressmud	AP22AF4605	KASHMIR BRIQUETTE	1,987.00
TI1424101727		17-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033744	25.0000	209.550	5,238.75	Pressmud	UP25BW6195	KASHMIR BRIQUETTE	5,501.00
TI1424101722		17-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033739	25.0000	164.550	4,113.75	Pressmud	HR71D9557	KASHMIR BRIQUETTE	4,320.00
TI1424101720		17-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033737	25.0000	137.100	3,427.50	Pressmud	UP22AW3384	KASHMIR BRIQUETTE	3,600.00
TI1424101719		17-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033736	25.0000	135.150	3,378.75	Pressmud	UP25BN6844	KASHMIR BRIQUETTE	3,547.00
TI1424101717		17-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033734	25.0000	80.450	2,011.25	Pressmud	HR71D9557	KASHMIR BRIQUETTE	2,111.00
TI1424101714		17-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033731	25.0000	184.000	4,600.00	Pressmud	UP25BW6195	KASHMIR BRIQUETTE	4,830.00
TI1424101695		16-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033712	25.0000	120.900	3,022.50	Pressmud	UP22AW3384	KASHMIR BRIQUETTE	3,175.00
TI1424101694		16-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033711	25.0000	120.350	3,008.75	Pressmud	UP25BN6844	KASHMIR BRIQUETTE	3,159.00
TI1424101691		16-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033708	25.0000	176.950	4,423.75	Pressmud	UP25BW6195	KASHMIR BRIQUETTE	4,646.00
TI1424101688		16-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033705	25.0000	76.350	1,908.75	Pressmud	HR71D9557	KASHMIR BRIQUETTE	2,005.00
TI1424101687		16-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033704	25.0000	120.100	3,002.50	Pressmud	UP22AW3384	KASHMIR BRIQUETTE	3,153.00

TI1424101686		16-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033703	25.0000	119.900	2,997.50	Pressmud	UP25BN6844	KASHMIR BRIQUETTE	3,149.00
TI1424101685		16-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033702	25.0000	155.350	3,883.75	Pressmud	UP25BW6195	KASHMIR BRIQUETTE	4,078.00
TI1424101684		16-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033701	25.0100	78.100	1,953.28	Pressmud	HR71D9557	KASHMIR BRIQUETTE	2,051.00
TI1424101603		13-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033620	25.0000	137.100	3,427.50	Pressmud	HR71D9557	KASHMIR BRIQUETTE	3,600.00
TI1424101545		11-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033562	25.0000	132.500	3,312.50	Pressmud	HR71D 9557	KASHMIR BRIQUETTE	3,479.00
TI1424101540		11-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033557	25.0000	163.000	4,075.00	Pressmud	UP25BW6195	KASHMIR BRIQUETTE	4,279.00
TI1424101537		10-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033554	25.0100	69.700	1,743.20	Pressmud	UP22AF4605	KASHMIR BRIQUETTE	1,831.00
TI1424101535		10-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033552	25.0000	114.700	2,867.50	Pressmud	UP22AW3384	KASHMIR BRIQUETTE	3,012.00
TI1424101531		10-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033548	25.0000	124.500	3,112.50	Pressmud	UP25BN 6844	KASHMIR BRIQUETTE	3,269.00
TI1424101530		10-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033547	25.0000	136.900	3,422.50	Pressmud	HR71D 9557	KASHMIR BRIQUETTE	3,595.00
TI1424101529		10-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033546	25.0000	174.850	4,371.25	Pressmud	UP25BW 6195	KASHMIR BRIQUETTE	4,589.00
TI1424101526		10-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033543	25.0000	66.150	1,653.75	Pressmud	AP22AF 4605	KASHMIR BRIQUETTE	1,736.00
TI1424101525		10-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033542	25.0000	110.350	2,758.75	Pressmud	UP22AW3384	KASHMIR BRIQUETTE	2,897.00
TI1424101524		10-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033541	25.0000	122.100	3,052.50	Pressmud	UP25BN 6844	KASHMIR BRIQUETTE	3,205.00
TI1424101523		10-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033540	25.0000	142.050	3,551.25	Pressmud	HR71D 9557	KASHMIR BRIQUETTE	3,729.00
TI1424101522		10-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033539	25.0000	191.550	4,788.75	Pressmud	UP25BW 6195	KASHMIR BRIQUETTE	5,029.00
TI1424101521		10-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033538	25.0000	70.450	1,761.25	Pressmud	AP22AF 4605	KASHMIR BRIQUETTE	1,849.00
TI1424101520		10-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033537	25.0000	110.500	2,762.50	Pressmud	UP22AW3384	KASHMIR BRIQUETTE	2,901.00
TI1424101519		10-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033536	25.0000	104.550	2,613.75	Pressmud	UP25BN 6844	KASHMIR BRIQUETTE	2,744.00
TI1424101509		09-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033526	25.0000	143.350	3,583.75	Pressmud	HR71D 9557	KASHMIR BRIQUETTE	3,764.00
TI1424101508		09-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033525	25.0000	185.050	4,626.25	Pressmud	UP25BW 6195	KASHMIR BRIQUETTE	4,858.00
TI1424101507		09-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033524	25.0000	110.250	2,756.25	Pressmud	UP22AW3384	KASHMIR BRIQUETTE	2,894.00
TI1424101505		09-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033522	25.0000	69.050	1,726.25	Pressmud	AP22AF 4605	KASHMIR BRIQUETTE	1,812.00
TI1424101504		09-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033521	25.0000	134.600	3,365.00	Pressmud	HR71D 9557	KASHMIR BRIQUETTE	3,533.00
TI1424101503		09-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033520	25.0000	176.550	4,413.75	Pressmud	UP25BW 6195	KASHMIR BRIQUETTE	4,634.00
TI1424101500		09-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033517	25.0000	66.200	1,655.00	Pressmud	AP22AF 4605	KASHMIR BRIQUETTE	1,737.00
TI1424101499		09-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033516	25.0000	125.550	3,138.75	Pressmud	UP25BN 6844	KASHMIR BRIQUETTE	3,295.00
TI1424101498		09-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033515	25.0000	119.650	2,991.25	Pressmud	UP22AW 3384	KASHMIR BRIQUETTE	3,141.00
TI1424101497		09-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033514	25.0000	139.450	3,486.25	Pressmud	HR71D 9557	KASHMIR BRIQUETTE	3,660.00
TI1424101496		09-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033513	25.0000	197.800	4,945.00	Pressmud	UP25BW 6195	KASHMIR BRIQUETTE	5,193.00
TI1424101494		09-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033511	25.0000	72.950	1,823.75	Pressmud	AP22AF 4605	KASHMIR BRIQUETTE	1,916.00
TI1424101484		08-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033501	25.0000	131.700	3,292.50	Pressmud	UP25BN 6844	KASHMIR BRIQUETTE	3,457.00
TI1424101600		13-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033617	25.0000	176.800	4,420.00	Pressmud	UP25BW6195	KASHMIR BRIQUETTE	4,642.00
TI1424101599		13-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033616	25.0000	109.900	2,747.50	Pressmud	UP25AW3384	KASHMIR BRIQUETTE	2,886.00
TI1424101598		13-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033615	25.0000	120.850	3,021.25	Pressmud	UP25BN6844	KASHMIR BRIQUETTE	3,173.00
TI1424101597		13-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033614	25.0000	74.250	1,856.25	Pressmud	AP22AF 4605	KASHMIR BRIQUETTE	1,948.00
TI1424101596		13-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033613	25.0000	144.850	3,621.25	Pressmud	HR71D 9557	KASHMIR BRIQUETTE	3,803.00
TI1424101594		13-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033611	25.0000	188.050	4,701.25	Pressmud	UP25BW 6195	KASHMIR BRIQUETTE	4,937.00
TI1424101592		13-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033609	25.0000	128.250	3,206.25	Pressmud	UP22AW 3384	KASHMIR BRIQUETTE	3,366.00
TI1424101591		13-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033608	25.0000	127.750	3,193.75	Pressmud	UP25BN 6844	KASHMIR BRIQUETTE	3,354.00
TI1424101590		13-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033607	25.0000	76.150	1,903.75	Pressmud	AP22AF 4605	KASHMIR BRIQUETTE	2,000.00
TI1424101589		13-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033606	25.0000	128.600	3,215.00	Pressmud	HR71D 9557	KASHMIR BRIQUETTE	3,375.00
TI1424101578		12-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033595	25.0000	188.450	4,711.25	Pressmud	UP25BW 6195	KASHMIR BRIQUETTE	4,947.00
TI1424101576		12-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033593	25.0000	117.700	2,942.50	Pressmud	UP22AW 3384	KASHMIR BRIQUETTE	3,091.00
TI1424101573		12-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033590	25.0000	124.500	3,112.50	Pressmud	UP25BN 6844	KASHMIR BRIQUETTE	3,269.00
TI1424101572		12-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033589	25.0000	150.900	3,772.50	Pressmud	HR71D 9557	KASHMIR BRIQUETTE	3,961.00
TI1424101571		12-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033588	25.0000	74.850	1,871.25	Pressmud	AP22AF 4605	KASHMIR BRIQUETTE	1,965.00
TI1424101570		12-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033587	25.0000	202.750	5,068.75	Pressmud	UP25BW 6195	KASHMIR BRIQUETTE	5,323.00
TI1424101569		12-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033586	25.0000	115.550	2,888.75	Pressmud	UP25AW 3384	KASHMIR BRIQUETTE	3,033.00
TI1424101568		12-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033585	25.0000	131.250	3,281.25	Pressmud	HR71D 9557	KASHMIR BRIQUETTE	3,445.00
TI1424101567		12-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033584	25.0000	122.500	3,062.50	Pressmud	UP25BN 6844	KASHMIR BRIQUETTE	3,217.00
TI1424101558		11-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033575	25.0000	187.650	4,691.25	Pressmud	UP25BW 6195	KASHMIR BRIQUETTE	4,925.00
TI1424101557		11-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033574	25.0000	74.750	1,868.75	Pressmud	AP22AF 4605	KASHMIR BRIQUETTE	1,963.00
TI1424101556		11-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033573	25.0000	118.250	2,956.25	Pressmud	UP22AW 3384	KASHMIR BRIQUETTE	3,104.00
TI1424101552		11-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033569	25.0000	122.900	3,072.50	Pressmud	UP25BN 6844	KASHMIR BRIQUETTE	3,227.00
TI1424101551		11-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033568	25.0000	135.750	3,393.75	Pressmud	HR71D 9557	KASHMIR BRIQUETTE	3,564.00
TI1424101550		11-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033567	25.0000	186.500	4,662.50	Pressmud	UP25BW 6195	KASHMIR BRIQUETTE	4,897.00
TI1424101548		11-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033565	25.0000	67.550	1,688.75	Pressmud	AP22AF4605	KASHMIR BRIQUETTE	1,773.00
TI1424101547		11-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033564	25.0000	106.050	2,651.25	Pressmud	UP22AW3384	KASHMIR BRIQUETTE	2,783.00
TI1424101546		11-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033563	25.0000	117.700	2,942.50	Pressmud	UP25BN6844	KASHMIR BRIQUETTE	3,091.00
TI1424101771		18-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033788	25.0000	172.100	4,302.50	Pressmud	UP25BW 6195	KASHMIR BRIQUETTE	4,519.00

TI1424102047		25-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140034064	25.0000	130.150	3,253.75	Pressmud	UP25BN6844	KASHMIR BRIQUETTE	3,416.00
TI1424102046		25-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140034063	25.0000	123.550	3,088.75	Pressmud	UP22AW3384	KASHMIR BRIQUETTE	3,244.00
TI1424102040		25-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140034057	25.0000	186.250	4,656.25	Pressmud	UP25BW6195	KASHMIR BRIQUETTE	4,888.00
TI1424102039		25-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140034056	25.0000	132.950	3,323.75	Pressmud	HR71D9557	KASHMIR BRIQUETTE	3,490.00
TI1424102038		25-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140034055	25.0000	75.450	1,886.25	Pressmud	AP22AF4605	KASHMIR BRIQUETTE	1,980.00
TI1424102037		25-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140034054	25.0000	133.200	3,330.00	Pressmud	UP25BN6844	KASHMIR BRIQUETTE	3,496.00
TI1424102036		25-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140034053	25.0000	129.600	3,240.00	Pressmud	UP22AW3384	KASHMIR BRIQUETTE	3,402.00
TI1424102034		25-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140034051	25.0000	198.550	4,963.75	Pressmud	UP25BW6195	KASHMIR BRIQUETTE	5,212.00
TI1424102029		25-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140034046	25.0000	133.700	3,342.50	Pressmud	HR71D9557	KASHMIR BRIQUETTE	3,511.00
TI1424102027		25-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140034044	25.0000	69.850	1,746.25	Pressmud	AP22AF4605	KASHMIR BRIQUETTE	1,834.00
TI1424102009		24-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140034026	25.0000	115.800	2,895.00	Pressmud	UP25BN6844	KASHMIR BRIQUETTE	3,039.00
TI1424102008		24-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140034025	25.0000	123.600	3,090.00	Pressmud	UP22AW3384	KASHMIR BRIQUETTE	3,244.00
TI1424102000		24-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140034017	25.0000	142.000	3,550.00	Pressmud	HR71D9557	KASHMIR BRIQUETTE	3,728.00
TI1424101999		24-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140034016	25.0000	83.350	2,083.75	Pressmud	AP22AF4605	KASHMIR BRIQUETTE	2,188.00
TI1424101998		24-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140034015	25.0000	124.850	3,121.25	Pressmud	UP25BN6844	KASHMIR BRIQUETTE	3,277.00
TI1424101997		24-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140034014	25.0000	126.500	3,162.50	Pressmud	UP22AW3384	KASHMIR BRIQUETTE	3,321.00
TI1424101995		24-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140034012	25.0000	125.550	3,138.75	Pressmud	UP25BW6195	KASHMIR BRIQUETTE	3,295.00
TI1424101994		24-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140034011	25.0000	139.150	3,478.75	Pressmud	HR71D9557	KASHMIR BRIQUETTE	3,653.00
TI1424101993		24-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140034010	25.0100	76.300	1,908.26	Pressmud	AP22AF4605	KASHMIR BRIQUETTE	2,004.00
TI1424101992		24-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140034009	25.0000	126.050	3,151.25	Pressmud	UP25BN6844	KASHMIR BRIQUETTE	3,309.00
TI1424101991		24-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140034008	25.0000	132.750	3,318.75	Pressmud	UP22AW3384	KASHMIR BRIQUETTE	3,485.00
TI1424101990		24-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140034007	25.0000	115.250	2,881.25	Pressmud	UP25BW6195	KASHMIR BRIQUETTE	3,025.00
TI1424101989		24-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140034006	25.0000	145.400	3,635.00	Pressmud	HR71D9557	KASHMIR BRIQUETTE	3,817.00
TI1424101986		24-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140034003	25.0000	72.200	1,805.00	Pressmud	AP22AF4605	KASHMIR BRIQUETTE	1,895.00
TI1424101969		23-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033986	25.0000	130.750	3,268.75	Pressmud	UP25BN6844	KASHMIR BRIQUETTE	3,433.00
TI1424101967		23-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033984	25.0000	122.300	3,057.50	Pressmud	UP22AW3384	KASHMIR BRIQUETTE	3,210.00
TI1424101964		23-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033981	25.0000	137.100	3,427.50	Pressmud	HR71D9557	KASHMIR BRIQUETTE	3,600.00
TI1424101963		23-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033980	25.0000	169.600	4,240.00	Pressmud	UP25BW6195	KASHMIR BRIQUETTE	4,452.00
TI1424102154		28-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140034171	25.0000	116.600	2,915.00	Pressmud	UP22AW3384	KASHMIR BRIQUETTE	3,061.00
TI1424102153		28-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140034170	25.0000	127.300	3,182.50	Pressmud	UP25BN6844	KASHMIR BRIQUETTE	3,343.00
TI1424102152		28-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140034169	25.0000	142.700	3,567.50	Pressmud	UP25BW6195	KASHMIR BRIQUETTE	3,746.00
TI1424102151		28-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140034168	25.0000	80.800	2,020.00	Pressmud	HR71D9557	KASHMIR BRIQUETTE	2,122.00
TI1424102150		28-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140034167	25.0000	57.750	1,443.75	Pressmud	AP22AF4605	KASHMIR BRIQUETTE	1,516.00
TI1424102131		27-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140034148	25.0000	73.400	1,835.00	Pressmud	AP22AF4605	KASHMIR BRIQUETTE	1,927.00
TI1424102130		27-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140034147	25.0000	137.050	3,426.25	Pressmud	UP22AW3384	KASHMIR BRIQUETTE	3,598.00
TI1424102125		27-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140034142	25.0000	139.350	3,483.75	Pressmud	HR71D9557	KASHMIR BRIQUETTE	3,658.00
TI1424102122		27-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140034139	25.0000	124.550	3,113.75	Pressmud	UP25BN6844	KASHMIR BRIQUETTE	3,270.00
TI1424102119		27-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140034136	25.0000	126.000	3,150.00	Pressmud	UP22AW3384	KASHMIR BRIQUETTE	3,308.00
TI1424102117		27-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140034134	25.0100	73.300	1,833.23	Pressmud	AP22AF4605	KASHMIR BRIQUETTE	1,925.00
TI1424102116		27-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140034133	25.0000	126.350	3,158.75	Pressmud	UP25BW6195	KASHMIR BRIQUETTE	3,317.00
TI1424102111		27-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140034128	25.0000	126.500	3,162.50	Pressmud	HR71D9557	KASHMIR BRIQUETTE	3,321.00
TI1424102096		26-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140034113	25.0000	117.150	2,928.75	Pressmud	UP25BN6844	KASHMIR BRIQUETTE	3,075.00
TI1424102095		26-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140034112	25.0000	118.850	2,971.25	Pressmud	UP22AW3384	KASHMIR BRIQUETTE	3,119.00
TI1424102091		26-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140034108	25.0000	136.000	3,400.00	Pressmud	UP21BW6195	KASHMIR BRIQUETTE	3,570.00
TI1424102087		26-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140034104	25.0000	126.550	3,163.75	Pressmud	UP25BN6844	KASHMIR BRIQUETTE	3,322.00
TI1424102085		26-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140034102	25.0000	139.800	3,495.00	Pressmud	HR71D9557	KASHMIR BRIQUETTE	3,669.00
TI1424102084		26-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140034101	25.0100	75.700	1,893.26	Pressmud	AP22AF4605	KASHMIR BRIQUETTE	1,987.00
TI1424102080		26-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140034097	25.0000	125.750	3,143.75	Pressmud	UP22AW3384	KASHMIR BRIQUETTE	3,302.00
TI1424102079		26-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140034096	25.0000	175.900	4,397.50	Pressmud	UP25BW6195	KASHMIR BRIQUETTE	4,618.00
TI1424102078		26-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140034095	25.0000	142.300	3,557.50	Pressmud	HR71D9557	KASHMIR BRIQUETTE	3,736.00
TI1424102076		26-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140034093	25.0100	78.100	1,953.28	Pressmud	AP22AF4605	KASHMIR BRIQUETTE	2,051.00
TI1424102075		26-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140034092	25.0000	126.250	3,156.25	Pressmud	UP22AW3384	KASHMIR BRIQUETTE	3,314.00
TI1424102074		26-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140034091	25.0000	121.250	3,031.25	Pressmud	UP25BN6844	KASHMIR BRIQUETTE	3,183.00
TI1424102072		26-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140034089	25.0000	164.550	4,113.75	Pressmud	UP25BW6195	KASHMIR BRIQUETTE	4,320.00
TI1424102052		25-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140034069	25.0000	136.800	3,420.00	Pressmud	HR71D9557	KASHMIR BRIQUETTE	3,592.00
TI1424102051		25-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140034068	25.0000	72.850	1,821.25	Pressmud	AP22AF4605	KASHMIR BRIQUETTE	1,913.00
TI1424101960		23-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033977	25.0000	0.200	5.00	Pressmud	UP25BN6844	KASHMIR BRIQUETTE	5.00
TI1424101870		21-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033887	25.0000	125.900	3,147.50	Pressmud	UP25BN6844	KASHMIR BRIQUETTE	3,306.00
TI1424101869		21-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033886	25.0000	117.800	2,945.00	Pressmud	UP22AW3384	KASHMIR BRIQUETTE	3,093.00
TI1424101866		21-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033883	25.0000	177.200	4,430.00	Pressmud	UP25BW6195	KASHMIR BRIQUETTE	4,652.00
TI1424101864		21-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033881	25.0000	154.450	3,861.25	Pressmud	HR71D9557	KASHMIR BRIQUETTE	4,055.00

TI1424101863		21-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033880	25.0000	75.950	1,898.75	Pressmud	AP22AF4605	KASHMIR BRIQUETTE	1,899.00
TI1424101842		20-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033859	25.0000	129.750	3,243.75	Pressmud	UP25BN6844	KASHMIR BRIQUETTE	3,306.00
TI1424101839		20-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033856	25.0000	121.150	3,028.75	Pressmud	UP22AW3384	KASHMIR BRIQUETTE	3,181.00
TI1424101838		20-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033855	25.0000	181.000	4,525.00	Pressmud	UP25BW6195	KASHMIR BRIQUETTE	4,751.00
TI1424101837		20-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033854	25.0000	143.400	3,585.00	Pressmud	HR71D9557	KASHMIR BRIQUETTE	3,765.00
TI1424101836		20-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033853	25.0000	75.650	1,891.25	Pressmud	AP22AF4605	KASHMIR BRIQUETTE	1,985.00
TI1424101835		20-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033852	25.0000	131.850	3,296.25	Pressmud	UP25BW6844	KASHMIR BRIQUETTE	3,460.00
TI1424101834		20-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033851	25.0000	129.300	3,232.50	Pressmud	UP22AW3384	KASHMIR BRIQUETTE	3,395.00
TI1424101833		20-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033850	25.0000	144.600	3,615.00	Pressmud	HR71D9557	KASHMIR BRIQUETTE	3,795.00
TI1424101831		20-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033848	25.0000	75.050	1,876.25	Pressmud	AP22AF4605	KASHMIR BRIQUETTE	1,970.00
TI1424101829		20-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033846	25.0000	186.450	4,661.25	Pressmud	UP25BW6195	KASHMIR BRIQUETTE	4,895.00
TI1424101827		20-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033844	25.0000	107.950	2,698.75	Pressmud	UP22BN6844	KASHMIR BRIQUETTE	2,833.00
TI1424101805		19-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033822	25.0000	119.950	2,998.75	Pressmud	UP22AW3384	KASHMIR BRIQUETTE	3,149.00
TI1424101804		19-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033821	25.0000	75.050	1,876.25	Pressmud	AP22AF4605	KASHMIR BRIQUETTE	1,970.00
TI1424101801		19-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033818	25.0000	132.450	3,311.25	Pressmud	HR71D9557	KASHMIR BRIQUETTE	3,477.00
TI1424101800		19-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033817	25.0000	183.700	4,592.50	Pressmud	UP25BW6195	KASHMIR BRIQUETTE	4,823.00
TI1424101799		19-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033816	25.0000	122.650	3,066.25	Pressmud	UP25BN6844	KASHMIR BRIQUETTE	3,220.00
TI1424101797		19-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033814	25.0000	123.750	3,093.75	Pressmud	UP22AW3384	KASHMIR BRIQUETTE	3,248.00
TI1424101796		19-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033813	25.0000	77.050	1,926.25	Pressmud	AP22AF4605	KASHMIR BRIQUETTE	2,022.00
TI1424101795		19-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033812	25.0000	135.900	3,397.50	Pressmud	HR71D9557	KASHMIR BRIQUETTE	3,568.00
TI1424101791		19-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033808	25.0000	185.250	4,631.25	Pressmud	UP25BW6195	KASHMIR BRIQUETTE	4,863.00
TI1424101790		19-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033807	25.0000	120.300	3,007.50	Pressmud	UP25BW6844	KASHMIR BRIQUETTE	3,158.00
TI1424101789		19-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033806	25.0000	110.700	2,767.50	Pressmud	UP22AW3384	KASHMIR BRIQUETTE	2,906.00
TI1424101775		18-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033792	25.0000	138.450	3,461.25	Pressmud	HR71D9557	KASHMIR BRIQUETTE	3,635.00
TI1424101959		23-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033976	25.0000	121.600	3,040.00	Pressmud	UP25BN6844	KASHMIR BRIQUETTE	3,192.00
TI1424101958		23-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033975	25.0000	73.350	1,833.75	Pressmud	AP22AF4605	KASHMIR BRIQUETTE	1,926.00
TI1424101955		23-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033972	25.0000	122.200	3,055.00	Pressmud	UP22AW3384	KASHMIR BRIQUETTE	3,207.00
TI1424101952		23-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033969	25.0000	136.050	3,401.25	Pressmud	HR71D9557	KASHMIR BRIQUETTE	3,571.00
TI1424101951		23-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033968	25.0000	77.350	1,933.75	Pressmud	AP22AF4605	KASHMIR BRIQUETTE	2,030.00
TI1424101950		23-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033967	25.0000	122.600	3,065.00	Pressmud	UP25BN6844	KASHMIR BRIQUETTE	3,219.00
TI1424101945		23-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033962	25.0000	121.900	3,047.50	Pressmud	UP22AW3384	KASHMIR BRIQUETTE	3,200.00
TI1424101944		23-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033961	25.0000	144.650	3,616.25	Pressmud	HR71D9557	KASHMIR BRIQUETTE	3,796.00
TI1424101928		22-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033945	25.0000	66.150	1,653.75	Pressmud	UP22AF4605	KASHMIR BRIQUETTE	1,736.00
TI1424101925		22-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033942	25.0000	122.750	3,068.75	Pressmud	UP22AW3384	KASHMIR BRIQUETTE	3,223.00
TI1424101924		22-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033941	25.0000	116.350	2,908.75	Pressmud	UP25BN6844	KASHMIR BRIQUETTE	3,055.00
TI1424101917		22-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033934	25.0000	133.950	3,348.75	Pressmud	HR71D9557	KASHMIR BRIQUETTE	3,517.00
TI1424101916		22-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033933	25.0000	119.450	2,986.25	Pressmud	UP25BN6844	KASHMIR BRIQUETTE	3,136.00
TI1424101914		22-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033931	25.0100	73.100	1,828.23	Pressmud	AP22AF4605	KASHMIR BRIQUETTE	1,920.00
TI1424101911		22-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033928	25.0000	120.650	3,016.25	Pressmud	UP22AW3384	KASHMIR BRIQUETTE	3,166.00
TI1424101910		22-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033927	25.0000	181.750	4,543.75	Pressmud	UP25BW6195	KASHMIR BRIQUETTE	4,772.00
TI1424101908		22-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033925	25.0000	147.550	3,688.75	Pressmud	HR71D9557	KASHMIR BRIQUETTE	3,873.00
TI1424101907		22-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033924	25.0000	75.350	1,883.75	Pressmud	AP22AF4605	KASHMIR BRIQUETTE	1,978.00
TI1424101905		22-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033922	25.0000	122.300	3,057.50	Pressmud	UP25BN6844	KASHMIR BRIQUETTE	3,210.00
TI1424101902		22-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033919	25.0000	124.550	3,113.75	Pressmud	UP22AW3384	KASHMIR BRIQUETTE	3,270.00
TI1424101901		22-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033918	25.0000	189.150	4,728.75	Pressmud	UP25BW6195	KASHMIR BRIQUETTE	4,965.00
TI1424101879		21-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033896	25.0000	72.000	1,800.00	Pressmud	AP22AF4605	KASHMIR BRIQUETTE	1,890.00
TI1424101878		21-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033895	25.0000	151.850	3,796.25	Pressmud	HR71D9557	KASHMIR BRIQUETTE	3,986.00
TI1424101877		21-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033894	25.0000	132.550	3,313.75	Pressmud	UP25BN6844	KASHMIR BRIQUETTE	3,480.00
TI1424101875		21-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033892	25.0000	128.000	3,200.00	Pressmud	UP22AW3384	KASHMIR BRIQUETTE	3,360.00
TI1424101873		21-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033890	25.0000	145.600	3,640.00	Pressmud	HR71D9557	KASHMIR BRIQUETTE	3,822.00
TI1424101872		21-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033889	25.0000	173.900	4,347.50	Pressmud	UP25BW6195	KASHMIR BRIQUETTE	4,566.00
TI1424101871		21-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033888	25.0000	78.850	1,971.25	Pressmud	AP22AF4605	KASHMIR BRIQUETTE	2,069.00
TI1424101223		28-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033250	25.0000	67.950	1,698.75	Pressmud	AP22AF 4605	KASHMIR BRIQUETTE	1,783.00
TI1424101216		27-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033243	25.0000	112.350	2,808.75	Pressmud	UP22AW3384	KASHMIR BRIQUETTE	2,949.00
TI1424101215		27-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033242	25.0000	175.750	4,393.75	Pressmud	UP25BW 6195	KASHMIR BRIQUETTE	4,614.00
TI1424101213		27-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033240	25.0000	137.800	3,445.00	Pressmud	HR71D9557	KASHMIR BRIQUETTE	3,617.00
TI1424101210		27-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033237	25.0100	68.900	1,723.19	Pressmud	AP22AF 4605	KASHMIR BRIQUETTE	1,809.00
TI1424101209		27-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033236	25.0000	114.100	2,852.50	Pressmud	UP22AW 3384	KASHMIR BRIQUETTE	2,995.00
TI1424101208		27-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033235	25.0000	178.050	4,451.25	Pressmud	UP25BW 6195	KASHMIR BRIQUETTE	4,673.00
TI1424101207		27-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033234	25.0000	137.300	3,432.50	Pressmud	HR71D 9557	KASHMIR BRIQUETTE	3,605.00
TI1424101206		27-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033233	25.0100	68.500	1,713.19	Pressmud	AP22AF 4605	KASHMIR BRIQUETTE	1,799.00

TI1424101205		27-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033232	25.0000	108.550	2,713.75	Pressmud	UP22AW 3384	KASHMIR BRIQUETTE	2,850.00
TI1424101204		27-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033231	25.0000	158.650	3,966.25	Pressmud	UP25BW 6195	KASHMIR BRIQUETTE	4,163.00
TI1424101203		27-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033230	25.0000	129.850	3,246.25	Pressmud	HR71D 9557	KASHMIR BRIQUETTE	3,408.00
TI1424101202		27-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033229	25.0000	66.250	1,656.25	Pressmud	AP22AF 4605	KASHMIR BRIQUETTE	1,738.00
TI1424101201		27-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033228	25.0000	108.950	2,723.75	Pressmud	UP22AW 3384	KASHMIR BRIQUETTE	2,860.00
TI1424101194		26-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033221	25.0100	70.700	1,768.21	Pressmud	AP22AF 4605	KASHMIR BRIQUETTE	1,856.00
TI1424101193		26-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033220	25.0000	141.850	3,546.25	Pressmud	HR71D 9557	KASHMIR BRIQUETTE	3,724.00
TI1424101192		26-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033219	25.0000	118.000	2,950.00	Pressmud	UP22AW 3384	KASHMIR BRIQUETTE	3,098.00
TI1424101191		26-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033218	25.0000	171.600	4,290.00	Pressmud	UP25BW 6195	KASHMIR BRIQUETTE	4,504.00
TI1424101190		26-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033217	25.0000	67.800	1,695.00	Pressmud	AP22AF 4605	KASHMIR BRIQUETTE	1,779.00
TI1424101189		26-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033216	25.0000	140.150	3,503.75	Pressmud	HR71D 9557	KASHMIR BRIQUETTE	3,680.00
TI1424101188		26-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033215	25.0000	113.050	2,826.25	Pressmud	UP22AW 3384	KASHMIR BRIQUETTE	2,968.00
TI1424101187		26-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033214	25.0000	115.300	2,882.50	Pressmud	UP25CB 4867	KASHMIR BRIQUETTE	3,027.00
TI1424101186		26-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033213	25.0000	177.800	4,445.00	Pressmud	UP25BW 6195	KASHMIR BRIQUETTE	4,667.00
TI1424101185		26-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033212	25.0000	68.550	1,713.75	Pressmud	AP22AF 4605	KASHMIR BRIQUETTE	1,800.00
TI1424101184		26-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033211	25.0000	138.050	3,451.25	Pressmud	HR71D9557	KASHMIR BRIQUETTE	3,623.00
TI1424101183		26-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033210	25.0000	109.650	2,741.25	Pressmud	UP22AW3384	KASHMIR BRIQUETTE	2,879.00
TI1424101182		26-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033209	25.0000	102.350	2,558.75	Pressmud	UP25CB 4867	KASHMIR BRIQUETTE	2,687.00
TI1424101181		26-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033208	25.0000	168.350	4,208.75	Pressmud	UP25BW 6195	KASHMIR BRIQUETTE	4,419.00
TI1424101268		30-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033295	25.0000	102.850	2,571.25	Pressmud	UP25BN 6844	KASHMIR BRIQUETTE	2,699.00
TI1424101266		30-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033293	25.0000	107.850	2,696.25	Pressmud	UP22AW 3384	KASHMIR BRIQUETTE	2,830.00
TI1424101260		29-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033287	25.0000	172.600	4,315.00	Pressmud	UP25BW 6195	KASHMIR BRIQUETTE	4,531.00
TI1424101259		29-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033286	25.0000	137.900	3,447.50	Pressmud	HR71D 9557	KASHMIR BRIQUETTE	3,620.00
TI1424101258		29-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033285	25.0000	69.150	1,728.75	Pressmud	AP22AF 4605	KASHMIR BRIQUETTE	1,815.00
TI1424101257		29-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033284	25.0000	118.200	2,955.00	Pressmud	UP25BN 6844	KASHMIR BRIQUETTE	3,103.00
TI1424101256		29-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033283	25.0000	108.000	2,700.00	Pressmud	UP22AW 3384	KASHMIR BRIQUETTE	2,836.00
TI1424101255		29-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033282	25.0000	161.750	4,043.75	Pressmud	UP25BW 6195	KASHMIR BRIQUETTE	4,246.00
TI1424101254		29-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033281	25.0000	137.850	3,446.25	Pressmud	HR71D 9557	KASHMIR BRIQUETTE	3,618.00
TI1424101253		29-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033280	25.0000	70.550	1,763.75	Pressmud	AP22AF 4605	KASHMIR BRIQUETTE	1,852.00
TI1424101252		29-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033279	25.0000	101.900	2,547.50	Pressmud	UP25BN 6844	KASHMIR BRIQUETTE	2,676.00
TI1424101251		29-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033278	25.0000	105.500	2,637.50	Pressmud	UP22AW3384	KASHMIR BRIQUETTE	2,770.00
TI1424101250		29-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033277	25.0000	150.200	3,755.00	Pressmud	UP25BW 6195	KASHMIR BRIQUETTE	3,943.00
TI1424101249		29-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033276	25.0000	127.200	3,180.00	Pressmud	HR71D 9557	KASHMIR BRIQUETTE	3,340.00
TI1424101242		28-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033269	25.0000	73.050	1,826.25	Pressmud	AP22AF 4605	KASHMIR BRIQUETTE	1,918.00
TI1424101239		28-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033266	25.0000	109.800	2,745.00	Pressmud	UP25BN 6844	KASHMIR BRIQUETTE	2,883.00
TI1424101238		28-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033265	25.0000	113.850	2,846.25	Pressmud	UP22AW3384	KASHMIR BRIQUETTE	2,988.00
TI1424101237		28-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033264	25.0000	130.450	3,261.25	Pressmud	UP25BW 6195	KASHMIR BRIQUETTE	3,425.00
TI1424101236		28-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033263	25.0000	122.500	3,062.50	Pressmud	HR71D 9557	KASHMIR BRIQUETTE	3,217.00
TI1424101235		28-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033262	25.0000	110.150	2,753.75	Pressmud	UP22AW3384	KASHMIR BRIQUETTE	2,892.00
TI1424101234		28-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033261	25.0000	99.850	2,496.25	Pressmud	UP25BN 6844	KASHMIR BRIQUETTE	2,620.00
TI1424101233		28-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033260	25.0000	69.400	1,735.00	Pressmud	AP22AF 4605	KASHMIR BRIQUETTE	1,821.00
TI1424101232		28-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033259	25.0000	165.300	4,132.50	Pressmud	UP25BW 6195	KASHMIR BRIQUETTE	4,339.00
TI1424101231		28-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033258	25.0000	144.600	3,615.00	Pressmud	HR71D 9557	KASHMIR BRIQUETTE	3,795.00
TI1424101230		28-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033257	25.0100	71.500	1,788.22	Pressmud	AP22AF 4605	KASHMIR BRIQUETTE	1,878.00
TI1424101229		28-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033256	25.0000	111.050	2,776.25	Pressmud	UP22AW3384	KASHMIR BRIQUETTE	2,914.00
TI1424101228		28-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033255	25.0000	125.950	3,148.75	Pressmud	UP25BW 6195	KASHMIR BRIQUETTE	3,307.00
TI1424101226		28-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033253	25.0000	124.550	3,113.75	Pressmud	HR71D9557	KASHMIR BRIQUETTE	3,270.00
TI1424101173		25-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033200	25.0000	67.150	1,678.75	Pressmud	UP22AF 4605	KASHMIR BRIQUETTE	1,763.00
TI1424101124		23-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033151	25.0000	175.050	4,376.25	Pressmud	UP25BW 6195	KASHMIR BRIQUETTE	4,594.00
TI1424101123		23-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033150	25.0000	138.000	3,450.00	Pressmud	HR71D 9557	KASHMIR BRIQUETTE	3,622.00
TI1424101122		23-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033149	25.0000	110.500	2,762.50	Pressmud	UP22AW 3384	KASHMIR BRIQUETTE	2,901.00
TI1424101121		23-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033148	25.0000	74.250	1,856.25	Pressmud	AP22AF 4605	KASHMIR BRIQUETTE	1,948.00
TI1424101120		23-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033147	25.0000	176.900	4,422.50	Pressmud	UP25BW 6195	KASHMIR BRIQUETTE	4,645.00
TI1424101119		23-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033146	25.0000	137.600	3,440.00	Pressmud	HR71D 9557	KASHMIR BRIQUETTE	3,612.00
TI1424101118		23-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033145	25.0000	106.250	2,656.25	Pressmud	UP22AW 3384	KASHMIR BRIQUETTE	2,788.00
TI1424101117		23-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033144	25.0000	69.200	1,730.00	Pressmud	AP22AF 4605	KASHMIR BRIQUETTE	1,816.00
TI1424101116		23-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033143	25.0000	166.500	4,162.50	Pressmud	UP25BW 6195	KASHMIR BRIQUETTE	4,371.00
TI1424101115		23-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033142	25.0000	135.400	3,385.00	Pressmud	HR71D 9557	KASHMIR BRIQUETTE	3,555.00
TI1424101108		22-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033135	25.0000	105.850	2,646.25	Pressmud	UP22AW 3384	KASHMIR BRIQUETTE	2,778.00
TI1424101107		22-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033134	25.0000	154.050	3,851.25	Pressmud	UP25BW 6195	KASHMIR BRIQUETTE	4,043.00
TI1424101106		22-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033133	25.0100	65.300	1,633.15	Pressmud	AP22AF 4605	KASHMIR BRIQUETTE	1,715.00

TI1424101105		22-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033132	25.0000	129.250	3,231.25	Pressmud	HR71D 9557	KASHMIR BRIQUETTE	3,699.00
TI1424101099		22-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033126	25.0000	100.200	2,505.00	Pressmud	UP22AW 3384	KASHMIR BRIQUETTE	2,871.00
TI1424101097		22-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033124	25.0000	163.650	4,091.25	Pressmud	UP25BW 6195	KASHMIR BRIQUETTE	4,295.00
TI1424101096		22-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033123	25.0000	124.000	3,100.00	Pressmud	HR71D 9557	KASHMIR BRIQUETTE	3,256.00
TI1424101094		22-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033121	25.0000	61.800	1,545.00	Pressmud	AP22AF 4605	KASHMIR BIRK	1,623.00
TI1424101093		22-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033120	25.0100	87.700	2,193.38	Pressmud	UP22AW 3384	KASHMIR BIRK	2,303.00
TI1424101088		21-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033115	25.0000	163.900	4,097.50	Pressmud	UP25BW 6195	KASHMIR BIRK	4,302.00
TI1424101087		21-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033114	25.0000	142.300	3,557.50	Pressmud	HR71D 9557	KASHMIR BRIQUETTE	3,736.00
TI1424101085		21-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033112	25.0000	72.800	1,820.00	Pressmud	AP22AF 4605	KASHMIR BRIQUETTE	1,912.00
TI1424101084		21-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033111	25.0000	100.400	2,510.00	Pressmud	UP22AW 3384	KASHMIR BRIQUETTE	2,636.00
TI1424101083		21-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033110	25.0000	172.600	4,315.00	Pressmud	UP25BW 6195	KASHMIR BRIQUETTE	4,531.00
TI1424101082		21-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033109	25.0000	130.550	3,263.75	Pressmud	HR71D9557	KASHMIR BRIQUETTE	3,428.00
TI1424101081		21-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033108	25.0100	81.700	2,043.32	Pressmud	UP22AW3384	KASHMIR BIRK	2,145.00
TI1424101080		21-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033107	25.0100	64.300	1,608.14	Pressmud	AP22AF4605	KASHMIR BIRK	1,688.00
TI1424101079		21-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033106	25.0000	134.700	3,367.50	Pressmud	UP25BW6195	KASHMIR BIRK	3,536.00
TI1424101172		25-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033199	25.0000	131.850	3,296.25	Pressmud	HR71D9557	KASHMIR BRIQUETTE	3,460.00
TI1424101169		25-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033196	25.0000	105.350	2,633.75	Pressmud	UP22AW3384	KASHMIR BRIQUETTE	2,766.00
TI1424101168		25-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033195	25.0100	99.500	2,488.50	Pressmud	UP25CB 4867	KASHMIR BRIQUETTE	2,612.00
TI1424101167		25-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033194	25.0000	162.500	4,062.50	Pressmud	UP25BW 6195	KASHMIR BRIQUETTE	4,267.00
TI1424101166		25-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033193	25.0000	136.600	3,415.00	Pressmud	HR71D9557	KASHMIR BRIQUETTE	3,585.00
TI1424101165		25-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033192	25.0000	108.700	2,717.50	Pressmud	UP22AW3384	KASHMIR BRIQUETTE	2,854.00
TI1424101164		25-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033191	25.0000	152.450	3,811.25	Pressmud	UP25BW 6195	KASHMIR BRIQUETTE	4,001.00
TI1424101163		25-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033190	25.0100	78.100	1,953.28	Pressmud	AP22AF 4605	KASHMIR BRIQUETTE	2,051.00
TI1424101162		25-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033189	25.0000	128.800	3,220.00	Pressmud	HR71D9557	KASHMIR BRIQUETTE	3,382.00
TI1424101161		25-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033188	25.0000	111.500	2,787.50	Pressmud	UP22AW3384	KASHMIR BRIQUETTE	2,928.00
TI1424101159		25-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033186	25.0000	143.350	3,583.75	Pressmud	HR71D9557	KASHMIR BRIQUETTE	3,764.00
TI1424101158		25-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033185	25.0000	74.450	1,861.25	Pressmud	UP22AF 4605	KASHMIR BRIQUETTE	1,955.00
TI1424101149		24-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033176	25.0000	116.250	2,906.25	Pressmud	UP22AW3384	KASHMIR BRIQUETTE	3,052.00
TI1424101148		24-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033175	25.0000	150.850	3,771.25	Pressmud	HR71D9557	KASHMIR BRIQUETTE	3,959.00
TI1424101146		24-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033173	25.0000	179.000	4,475.00	Pressmud	UP25BW 6195	KASHMIR BRIQUETTE	4,699.00
TI1424101145		24-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033172	25.0100	74.300	1,858.24	Pressmud	AP22AF4605	KASHMIR BRIQUETTE	1,950.00
TI1424101144		24-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033171	25.0000	110.050	2,751.25	Pressmud	UP22AW3384	KASHMIR BRIQUETTE	2,889.00
TI1424101143		24-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033170	25.0000	147.800	3,695.00	Pressmud	HR71D9557	KASHMIR BRIQUETTE	3,879.00
TI1424101141		24-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033168	25.0000	77.400	1,935.00	Pressmud	AP22AF4605	KASHMIR BRIQUETTE	2,031.00
TI1424101140		24-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033167	25.0000	112.500	2,812.50	Pressmud	UP22AW3384	KASHMIR BRIQUETTE	2,953.00
TI1424101139		24-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033166	25.0000	70.250	1,756.25	Pressmud	AP22AF4605	KASHMIR BRIQUETTE	1,844.00
TI1424101138		24-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033165	25.0000	145.300	3,632.50	Pressmud	HR71D9557	KASHMIR BRIQUETTE	3,815.00
TI1424101137		24-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033164	25.0000	109.500	2,737.50	Pressmud	UP22AW 3384	KASHMIR BRIQUETTE	2,874.00
TI1424101135		24-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033162	25.0000	176.850	4,421.25	Pressmud	UP25BW 6195	KASHMIR BRIQUETTE	4,643.00
TI1424101134		24-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033161	25.0000	74.950	1,873.75	Pressmud	AP22AF 4605	KASHMIR BRIQUETTE	1,968.00
TI1424101133		24-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033160	25.0000	143.800	3,595.00	Pressmud	HR71D 9557	KASHMIR BRIQUETTE	3,775.00
TI1424101126		23-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033153	25.0000	111.100	2,777.50	Pressmud	UP22AW 3384	KASHMIR BRIQUETTE	2,916.00
TI1424101125		23-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033152	25.0100	74.100	1,853.24	Pressmud	AP22AF 4605	KASHMIR BRIQUETTE	1,945.00
TI1424101269		30-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033296	25.0000	68.850	1,721.25	Pressmud	AP22AF 4605	KASHMIR BRIQUETTE	1,807.00
TI1424101430		06-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033447	25.0000	122.150	3,053.75	Pressmud	UP25BN 6844	KASHMIR BRIQUETTE	3,206.00
TI1424101429		06-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033446	25.0000	117.850	2,946.25	Pressmud	UP22AW 3384	KASHMIR BRIQUETTE	3,094.00
TI1424101428		06-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033445	25.0000	143.100	3,577.50	Pressmud	HR71D 9557	KASHMIR BRIQUETTE	3,756.00
TI1424101427		06-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033444	25.0000	71.350	1,783.75	Pressmud	AP22AF 4605	KASHMIR BRIQUETTE	1,874.00
TI1424101426		06-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033443	25.0000	191.000	4,775.00	Pressmud	UP25BW 6195	KASHMIR BRIQUETTE	5,013.00
TI1424101419		05-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033436	25.0000	69.250	1,731.25	Pressmud	AP22AF 4605	KASHMIR BRIQUETTE	1,817.00
TI1424101416		05-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033433	25.0000	115.850	2,896.25	Pressmud	UP25BN 6844	KASHMIR BRIQUETTE	3,040.00
TI1424101415		05-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033432	25.0000	114.300	2,857.50	Pressmud	UP22AW 3384	KASHMIR BRIQUETTE	3,000.00
TI1424101414		05-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033431	25.0000	136.100	3,402.50	Pressmud	HR71D 9557	KASHMIR BRIQUETTE	3,573.00
TI1424101411		05-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033428	25.0000	188.150	4,703.75	Pressmud	UP25BW 6195	KASHMIR BRIQUETTE	4,940.00
TI1424101410		05-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033427	25.0000	67.450	1,686.25	Pressmud	AP22AF 4605	KASHMIR BRIQUETTE	1,770.00
TI1424101409		05-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033426	25.0000	122.150	3,053.75	Pressmud	UP25BN 6844	KASHMIR BRIQUETTE	3,206.00
TI1424101407		05-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033424	25.0000	111.600	2,790.00	Pressmud	UP22AW 3384	KASHMIR BRIQUETTE	2,930.00
TI1424101406		05-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033423	25.0000	140.150	3,503.75	Pressmud	HR71D 9557	KASHMIR BRIQUETTE	3,680.00
TI1424101405		05-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033422	25.0100	69.300	1,733.19	Pressmud	AP22AF 4605	KASHMIR BRIQUETTE	1,819.00
TI1424101404		05-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033421	25.0000	181.000	4,525.00	Pressmud	UP25BW 6195	KASHMIR BRIQUETTE	4,751.00
TI1424101397		04-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033414	25.0000	113.000	2,825.00	Pressmud	UP25BN 6844	KASHMIR BRIQUETTE	2,967.00

TI1424101396		04-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033413	25.0000	107.050	2,676.25	Pressmud	UP22AW 3384	KASHMIR BRIQUETTE	2,640.00
TI1424101389		04-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033406	25.0000	178.850	4,471.25	Pressmud	UP25BW 6195	KASHMIR BRIQUETTE	4,600.00
TI1424101387		04-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033404	25.0000	66.050	1,651.25	Pressmud	AP22AF 4605	KASHMIR BRIQUETTE	1,733.00
TI1424101386		04-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033403	25.0000	129.900	3,247.50	Pressmud	HR71D 9557	KASHMIR BRIQUETTE	3,410.00
TI1424101385		04-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033402	25.0000	126.400	3,160.00	Pressmud	UP25BN 6844	KASHMIR BRIQUETTE	3,318.00
TI1424101384		04-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033401	25.0000	112.300	2,807.50	Pressmud	UP22AW 3384	KASHMIR BRIQUETTE	2,948.00
TI1424101383		04-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033400	25.0000	184.650	4,616.25	Pressmud	UP25BW6195	KASHMIR BRIQUETTE	4,846.00
TI1424101382		04-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033399	25.0000	135.150	3,378.75	Pressmud	HR71D 9557	KASHMIR BRIQUETTE	3,547.00
TI1424101381		04-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033398	25.0000	74.250	1,856.25	Pressmud	AP22AF 4605	KASHMIR BRIQUETTE	1,948.00
TI1424101380		04-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033397	25.0000	110.150	2,753.75	Pressmud	UP25BN6844	KASHMIR BRIQUETTE	2,892.00
TI1424101379		04-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033396	25.0000	112.650	2,816.25	Pressmud	UP22AW3384	KASHMIR BRIQUETTE	2,956.00
TI1424101483		08-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033500	25.0000	124.050	3,101.25	Pressmud	UP22AW 3384	KASHMIR BRIQUETTE	3,257.00
TI1424101482		08-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033499	25.0000	137.600	3,440.00	Pressmud	HR71D 9557	KASHMIR BRIQUETTE	3,612.00
TI1424101481		08-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033498	25.0000	199.850	4,996.25	Pressmud	UP25BW 6195	KASHMIR BRIQUETTE	5,246.00
TI1424101480		08-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033497	25.0100	66.900	1,673.17	Pressmud	UP22AF 4605	KASHMIR BRIQUETTE	1,757.00
TI1424101479		08-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033496	25.0000	125.700	3,142.50	Pressmud	UP25BN 6844	KASHMIR BRIQUETTE	3,301.00
TI1424101478		08-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033495	25.0000	118.450	2,961.25	Pressmud	UP22AW3384	KASHMIR BRIQUETTE	3,109.00
TI1424101477		08-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033494	25.0000	135.650	3,391.25	Pressmud	HR71D 9557	KASHMIR BRIQUETTE	3,561.00
TI1424101476		08-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033493	25.0000	191.050	4,776.25	Pressmud	UP25BW 6195	KASHMIR BRIQUETTE	5,014.00
TI1424101474		08-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033491	25.0000	70.000	1,750.00	Pressmud	AP22AF 4605	KASHMIR BRIQUETTE	1,838.00
TI1424101473		08-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033490	25.0000	123.700	3,092.50	Pressmud	UP25BN6844	KASHMIR BRIQUETTE	3,247.00
TI1424101467		07-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033484	25.0000	116.950	2,923.75	Pressmud	UP22AW3384	KASHMIR BRIQUETTE	3,070.00
TI1424101466		07-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033483	25.0000	138.050	3,451.25	Pressmud	HR71D 9557	KASHMIR BRIQUETTE	3,623.00
TI1424101464		07-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033481	25.0000	71.250	1,781.25	Pressmud	AP22AF 4605	KASHMIR BRIQUETTE	1,871.00
TI1424101462		07-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033479	25.0000	195.950	4,898.75	Pressmud	UP25BW 6195	KASHMIR BRIQUETTE	5,143.00
TI1424101459		07-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033476	25.0000	127.550	3,188.75	Pressmud	UP25BN6844	KASHMIR BRIQUETTE	3,349.00
TI1424101455		07-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033472	25.0000	115.750	2,893.75	Pressmud	UP22AW3384	KASHMIR BRIQUETTE	3,038.00
TI1424101454		07-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033471	25.0000	130.450	3,261.25	Pressmud	HR71D 9557	KASHMIR BRIQUETTE	3,425.00
TI1424101453		07-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033470	25.0000	199.500	4,987.50	Pressmud	UP25BW 6195	KASHMIR BRIQUETTE	5,238.00
TI1424101451		07-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033468	25.0000	72.150	1,803.75	Pressmud	AP22AF 4605	KASHMIR BRIQUETTE	1,894.00
TI1424101450		07-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033467	25.0000	126.500	3,162.50	Pressmud	UP25BN 6844	KASHMIR BRIQUETTE	3,321.00
TI1424101449		07-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033466	25.0000	114.700	2,867.50	Pressmud	UP22AW 3384	KASHMIR BRIQUETTE	3,012.00
TI1424101440		06-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033457	25.0000	69.250	1,731.25	Pressmud	AP22AF 4605	KASHMIR BRIQUETTE	1,817.00
TI1424101439		06-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033456	25.0000	139.850	3,496.25	Pressmud	HR71D 9557	KASHMIR BRIQUETTE	3,670.00
TI1424101437		06-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033454	25.0000	201.550	5,038.75	Pressmud	UP25BW 6195	KASHMIR BRIQUETTE	5,291.00
TI1424101435		06-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033452	25.0000	126.450	3,161.25	Pressmud	UP25BN 6844	KASHMIR BRIQUETTE	3,319.00
TI1424101434		06-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033451	25.0000	114.300	2,857.50	Pressmud	UP22AW 3384	KASHMIR BRIQUETTE	3,000.00
TI1424101432		06-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033449	25.0000	131.100	3,277.50	Pressmud	HR71D 9557	KASHMIR BRIQUETTE	3,442.00
TI1424101431		06-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033448	25.0000	195.950	4,898.75	Pressmud	UP25BW 6195	KASHMIR BRIQUETTE	5,143.00
TI1424101373		03-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033390	25.0000	169.600	4,240.00	Pressmud	UP25BW6195	KASHMIR BRIQUETTE	4,452.00
TI1424101328		01-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033345	25.0000	110.800	2,770.00	Pressmud	UP22AW 3384	KASHMIR BRIQUETTE	2,908.00
TI1424101327		01-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033344	25.0000	177.350	4,433.75	Pressmud	UP25BW 6195	KASHMIR BRIQUETTE	4,656.00
TI1424101326		01-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033343	25.0000	134.600	3,365.00	Pressmud	HR71D 9557	KASHMIR BRIQUETTE	3,533.00
TI1424101325		01-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033342	25.0000	120.400	3,010.00	Pressmud	UP25BN 6844	KASHMIR BRIQUETTE	3,160.00
TI1424101324		01-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033341	25.0000	81.000	2,025.00	Pressmud	AP22AF 4605	KASHMIR BRIQUETTE	2,127.00
TI1424101316		31-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033333	25.0000	110.900	2,772.50	Pressmud	UP22AW 3384	KASHMIR BRIQUETTE	2,911.00
TI1424101315		31-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033332	25.0000	131.450	3,286.25	Pressmud	HR71D 9557	KASHMIR BRIQUETTE	3,450.00
TI1424101314		31-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033331	25.0000	68.600	1,715.00	Pressmud	AP22AF 4605	KASHMIR BRIQUETTE	1,801.00
TI1424101312		31-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033329	25.0000	183.850	4,596.25	Pressmud	UP25BW 6195	KASHMIR BRIQUETTE	4,826.00
TI1424101311		31-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033328	25.0000	117.500	2,937.50	Pressmud	UP25BN 6844	KASHMIR BRIQUETTE	3,084.00
TI1424101309		31-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033327	25.0000	117.650	2,941.25	Pressmud	UP22AW 3384	KASHMIR BRIQUETTE	3,089.00
TI1424101302		31-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033326	25.0000	176.600	4,415.00	Pressmud	UP25BW 6195	KASHMIR BRIQUETTE	4,635.00
TI1424101298		31-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033325	25.0000	138.800	3,470.00	Pressmud	HR71D 9557	KASHMIR BRIQUETTE	3,644.00
TI1424101297		31-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033324	25.0000	122.250	3,056.25	Pressmud	UP25BN 6844	KASHMIR BRIQUETTE	3,208.00
TI1424101296		31-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033323	25.0000	116.500	2,912.50	Pressmud	UP22AW 3384	KASHMIR BRIQUETTE	3,059.00
TI1424101295		31-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033322	25.0000	177.650	4,441.25	Pressmud	UP25BW 6195	KASHMIR BRIQUETTE	4,663.00
TI1424101294		31-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033321	25.0000	138.350	3,458.75	Pressmud	HR71D 9557	KASHMIR BRIQUETTE	3,631.00
TI1424101293		31-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033320	25.0100	69.300	1,733.19	Pressmud	AP22AF 4605	KASHMIR BRIQUETTE	1,819.00
TI1424101284		30-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033311	25.0000	62.950	1,573.75	Pressmud	AP22AF 4605	KASHMIR BRIQUETTE	1,652.00
TI1424101283		30-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033310	25.0000	118.400	2,960.00	Pressmud	UP25BN 6844	KASHMIR BRIQUETTE	3,108.00
TI1424101282		30-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033309	25.0000	109.500	2,737.50	Pressmud	UP22AW 3384	KASHMIR BRIQUETTE	2,874.00

TI1424101277		30-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033304	25.0000	136.700	3,417.50	Pressmud	HR71D 9557	KASHMIR BRIQUETTE	3,589.00
TI1424101275		30-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033302	25.0000	185.950	4,648.75	Pressmud	UP25BW 6195	KASHMIR BRIQUETTE	4,883.00
TI1424101274		30-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033301	25.0000	69.750	1,743.75	Pressmud	AP22AF 4605	KASHMIR BRIQUETTE	1,832.00
TI1424101273		30-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033300	25.0000	111.350	2,783.75	Pressmud	UP25BN 6844	KASHMIR BRIQUETTE	2,924.00
TI1424101272		30-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033299	25.0000	105.850	2,646.25	Pressmud	UP22AW 3384	KASHMIR BRIQUETTE	2,778.00
TI1424101271		30-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033298	25.0000	131.250	3,281.25	Pressmud	HR71D 9557	KASHMIR BRIQUETTE	3,445.00
TI1424101270		30-12-2024	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033297	25.0000	178.050	4,451.25	Pressmud	UP25BW 6195	KASHMIR BRIQUETTE	4,673.00
TI1424101372		03-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033389	25.0000	132.500	3,312.50	Pressmud	HR71D 9557	KASHMIR BRIQUETTE	3,479.00
TI1424101371		03-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033388	25.0000	70.050	1,751.25	Pressmud	AP22AF 4605	KASHMIR BRIQUETTE	1,839.00
TI1424101370		03-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033387	25.0000	110.150	2,753.75	Pressmud	UP25BN 6844	KASHMIR BRIQUETTE	2,892.00
TI1424101369		03-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033386	25.0000	108.700	2,717.50	Pressmud	UP22AW 3384	KASHMIR BRIQUETTE	2,854.00
TI1424101368		03-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033385	25.0000	178.650	4,466.25	Pressmud	UP25BW 6195	KASHMIR BRIQUETTE	4,690.00
TI1424101367		03-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033384	25.0000	130.400	3,260.00	Pressmud	HR71D 9557	KASHMIR BRIQUETTE	3,424.00
TI1424101366		03-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033383	25.0100	67.700	1,693.18	Pressmud	AP22AF 4605	KASHMIR BRIQUETTE	1,777.00
TI1424101365		03-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033382	25.0000	109.950	2,748.75	Pressmud	UP25BN 6844	KASHMIR BRIQUETTE	2,887.00
TI1424101364		03-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033381	25.0000	109.500	2,737.50	Pressmud	UP22AW 3384	KASHMIR BRIQUETTE	2,874.00
TI1424101363		03-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033380	25.0000	165.450	4,136.25	Pressmud	UP25BW 6195	KASHMIR BRIQUETTE	4,342.00
TI1424101356		02-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033373	25.0000	67.000	1,675.00	Pressmud	AP22AF 4605	KASHMIR BRIQUETTE	1,759.00
TI1424101355		02-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033372	25.0000	128.450	3,211.25	Pressmud	HR71D 9557	KASHMIR BRIQUETTE	3,371.00
TI1424101351		02-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033368	25.0000	102.950	2,573.75	Pressmud	UP25BN 6844	KASHMIR BRIQUETTE	2,702.00
TI1424101350		02-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033367	25.0000	104.100	2,602.50	Pressmud	UP22AW 3384	KASHMIR BRIQUETTE	2,733.00
TI1424101349		02-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033366	25.0000	169.000	4,225.00	Pressmud	UP25BW 6195	KASHMIR BRIQUETTE	4,437.00
TI1424101348		02-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033365	25.0000	137.200	3,430.00	Pressmud	HR71D 9557	KASHMIR BRIQUETTE	3,602.00
TI1424101347		02-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033364	25.0000	67.450	1,686.25	Pressmud	AP22AF 4605	KASHMIR BRIQUETTE	1,770.00
TI1424101346		02-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033363	25.0000	114.850	2,871.25	Pressmud	UP25BN 6844	KASHMIR BRIQUETTE	3,015.00
TI1424101345		02-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033362	25.0000	108.150	2,703.75	Pressmud	UP22AW 3384	KASHMIR BRIQUETTE	2,840.00
TI1424101344		02-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033361	25.0000	162.800	4,070.00	Pressmud	UP25BW 6195	KASHMIR BRIQUETTE	4,274.00
TI1424101343		02-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033360	25.0000	134.900	3,372.50	Pressmud	HR71D 9557	KASHMIR BRIQUETTE	3,541.00
TI1424101342		02-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033359	25.0000	67.150	1,678.75	Pressmud	AP22AF 4605	KASHMIR BRIQUETTE	1,763.00
TI1424101341		02-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033358	25.0000	105.050	2,626.25	Pressmud	UP25BN 6844	KASHMIR BRIQUETTE	2,758.00
TI1424101334		01-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033351	25.0000	110.000	2,750.00	Pressmud	UP22AW 3384	KASHMIR BRIQUETTE	2,888.00
TI1424101333		01-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033350	25.0000	172.400	4,310.00	Pressmud	UP25BW 6195	KASHMIR BRIQUETTE	4,526.00
TI1424101331		01-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033348	25.0000	132.400	3,310.00	Pressmud	HR71D 9557	KASHMIR BRIQUETTE	3,476.00
TI1424101330		01-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033347	25.0000	70.600	1,765.00	Pressmud	AP22AF 4605	KASHMIR BRIQUETTE	1,853.00
TI1424101329		01-01-2025	KASHMIR BRIQUETTEA UNIT	BAREILL	3050014365	PRESS MUD 2024-25	0140033346	25.0000	117.350	2,933.75	Pressmud	UP25BN 6844	KASHMIR BRIQUETTE	3,080.00
			KASHMIR BRIQUETTEA UNIT						######	########				########
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Dispatch Trac	3,07,580.600
Dispatch Farr	6,223.600
Total	3,13,804.200

Dhampur Bio Organics Limited

Date: 05.02.2025

To,
The Member Secretary,
State Environment Impact Assessment Authority (SEIAA), Uttar Pradesh
Directorate, Govt of U.P. Dr Bhim Rao Ambedkar Paryavaran Parisar,
Vineet Khand I, Gomti Nagar
Lucknow - 226010

Subject: Request for Amendment in Environmental Clearance Condition

Reference: EC Identification No. EC23B025UP120189 dated: 27th March 2023

Dear Sir/Madam,

In reference to the above-mentioned subject, we would like to inform you that we have obtained the Environmental Clearance with EC Identification No. EC23B025UP120189 dated: 27th March 2023 for our project, expansion of existing Sugar unit from 5000 TCD to 11000 TCD along with 43.5 MW Co gen power at village – Nagaria Sadat, Block & Tehsil: Meerganj, District – Bareilly (UP) of M/s Dhampur Bio Organics Limited Meerganj Division- Sugar, (Formerly known as DSM Sugar Meerganj), under the provisions of the Environmental Impact Assessment (EIA) Notification, 2006.

Our company is committed to maintaining environmental sustainability and ensuring compliance with all regulations. However, after the issuance of the EC, certain conditions need to be amended to accommodate the changes that have arisen in the project execution plans and technical requirements.

The specific conditions that we seek to amend are as follows:

1. **Specific Condition (iv)**: The project proponent will install 3 CAAQMS in consultation with UPPCB.

Above specific condition is not feasible for us to implement within premises hence we are submitting justification for amendment in EC conditions.

We respectfully request you to review this condition and consider the amendment based on the following justifications:

Address: Sindhauli Road, Tehseel – Meerganj, Distt. – Bareilly, Uttar Pradesh – 243504, Tel:- +91 9897099847, Email: meerganj@dhampur.com
Corp. Office: Second Floor, Plot No. 201, Okhla Industrial Estate, Phase III, New Delhi – 110 020, India, Tel: +91-11 – 6905 5200, Email: corporateoffice@dhampur.com, Website: www.dhampur.com
Regd. Office: Sugar Mill Compound, Village & Post – Asmoli, Distt. Sambhal, Uttar Pradesh – 244304, Tel: +91-7302318313
CIN : L15100UP2020PLC136939

Dhampur Bio Organics Limited

Sr.no.	Conditions	Justification
1	The project proponent will install 3 CAAQMS in consultation with UPPCB.	Due to the seasonal nature of the sugar industry using biomass as fuel, installing a CAAQMS is not justifiable as the plant is inactive during off-seasons, leading to underuse and unnecessary costs for operation and maintenance. CAAQMS systems are expensive to install and maintain year-round, making them less cost-effective compared to a stationary AAQ monitoring system, which provides a more economical solution for air quality monitoring during operational and non-operational months. In place of CAAQMS, AAQ Monitoring Station will be identified as per CPCB guidelines and regular monitoring will be done at the same. In addition to above, quarterly third-party analysis (NABL certified laboratory) will be conducted as per the conditions.

We assure you that all necessary steps will be taken to continue complying with the environmental norms, and these amendments will further strengthen our commitment to responsible environmental management.

We kindly request you to process this amendment request at your earliest convenience and issue the revised Environmental Clearance for our project.

Thank you

Your's Faithfully

M/s Dhampur Bio Organics Ltd Meerganj Division-Sugar

Authorised Signatory

Address: Sindhauli Road, Tehseel – Meerganj, Distt. – Bareilly, Uttar Pradesh – 243504, Tel:- +91 9897099847, Email: meerganj@dhampur.com
Corp. Office: Second Floor, Plot No. 201, Okhla Industrial Estate, Phase III, New Delhi – 110 020, India, Tel: +91-11 – 6905 5200, Email: corporateoffice@dhampur.com, Website: www.dhampur.com
Regd. Office: Sugar Mill Compound, Village & Post – Asmoli, Distt. Sambhal, Uttar Pradesh – 244304, Tel: +91-7302318313
CIN : L15100UP2020PLC136939

सत्यमेव जयते

File No.:
Government of India
Ministry of Environment, Forest and Climate Change
(Issued by the State Environment Impact Assessment Authority(SEIAA), UTTAR PRADESH)
****

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Dated **24/05/2025**

To,

Shri Amit Sharma
M/s DHAMPUR BIO ORGANICS LIMITED
Sugar Mill Compound, Vill - Asmoli, Distt- Sambhal (UP) , SAMBHAL, UTTAR PRADESH, 244304
environmentalcompliance@dhampur.com

Subject: Amendment in Environmental Clearance (EC) dated 04/03/2025 granted to the project under the provision of the EIA Notification 2006 and as amended thereof-regarding Expansion of existing Sugar unit from 5000 TCD to 11000 TCD along with 43.5 MW Co gen power at village – Nagaria Sadat, Block & Tehsil: Meerganj, District – Bareilly (UP) of M/s Dhampur Bio Organics Limited, Unit - Meerganj, Sugar – Division, (Formerly known as DSM Sugar Meerganj).

Sir/Madam,

This is in reference to your application submitted to SEIAA vide proposal number SIA/UP/IND2/527201/2025 dated 04/03/2025 for grant of an amendment in prior Environmental Clearance (EC) to the project under the provision of the EIA Notification 2006-and as amended thereof.

2. The particulars of the proposal are as below :

(i) EC Identification No.	EC25B2506UP5204119A
(ii) File No.	
(iii) Clearance Type	Amendment in EC
(iv) Category	B1
(v) Schedule No./ Project Activity	5(j) Sugar Industry
(vii) Name of Project	Expansion of existing Sugar unit from 5000 TCD to 11000 TCD along with 43.5 MW Co gen power at village – Nagaria Sadat, Block & Tehsil: Meerganj, District – Bareilly (UP) of M/s Dhampur Bio Organics Limited, Unit - Meerganj, Sugar – Division, (Formerly known as DSM Sugar Meerganj)
(viii) Location of Project (District, State)	BAREILLY, UTTAR PRADESH
(ix) Issuing Authority	SEIAA
(x) EC Date	21/05/2025
(xi) Applicability of General Conditions	NO

3. In view of the particulars given in the Para 1 above, the project proposal interalia including Form-1(Part A, B and C) were submitted to the SEIAA for an appraisal by the State Environment Impact Assessment Authority(SEIAA) Appraisal Committee SEIAA under the provision of EIA notification 2006 and its subsequent amendments.

4. The above-mentioned proposal has been considered by State Environment Impact AssessmentAuthority(SEIAA) Appraisal Committee (SEIAA) in the meeting held on 09/05/2025. The minutes of the meeting and all the project documents are available on PARIVESH portal which can be accessed from the PARIVESH portal by scanning the QR Code above.

5. The brief about the reasons for an amendment requested along with comparison table illustrating the details of amendments

6. The SEIAA, in its meeting held on 09-05-2024 and SEAC meeting dated 01-04-2025 based on information & clarifications provided by the project proponent and after detailed deliberations recommended the proposal for grant of amendment in Environment Clearance under the provision of EIA Notification, 2006 and as amended thereof.

7. The SEIAA/SEAC has examined the proposal in accordance with the extant provisions of the Environment Impact Assessment (EIA) Notification, 2006 & further amendments thereto and based on the recommendations of the State Environment Impact Assessment Authority(SEIAA) Appraisal Committee hereby accords amendment in Environment Clearance letter no. EC23B025UP120189, dated 27/03/2023 for the instant proposal to M/s. DHAMPUR BIO ORGANICS LIMITED under the provisions of EIA Notification, 2006 and as amended thereof subject to compliance of EC conditions, general instructions issued vide EC letter dated and EC identification number no. EC23B025UP120189, dated 27/03/2023 and following additional specific conditions as mentioned below:

8. This issues with the approval of the Competent Authority

SEIAA noted that SEAC has recommended to amend the environmental clearance letter no. EC23B025UP120189, dated 27/03/2023. SEIAA noted that project proponent has proposed the following amendment in EC:-

Details mentioned in EC letter	Proposed amendment in EC letter
Specific Condition No. IV :	Specific Condition No. IV :
IV. The project proponent will install 03 CAAQMS in consultation with UPPCB.	IV. AAQ monitoring station will be identified as per PCB guidelines and regular monitoring will be done at the project site and quarterly third party analysis (NABL certified laboratory) will be conducted.

SEIAA opined that it is important to monitor ambient air quality as per CPCB notification sa.bi.-29016/20/19/PCI dated 18.09.2009 since the Sugar industry is highly polluting and is in red category regular monitoring will be done at the project site and quarterly analysis shall be done by the project proponent by installing ambient air monitoring station.

Annexure 17

WATER AUDIT REPORT
AS PER THE GUIDELINES OF CGWA
MINISTRY OF JAL SHAKTI

AT

M/S DHAMPUR BIO ORGANICS LIMITED
(UNIT: MEERGANJ, DIVISION : SUGAR)

VILLAGE: NAGARIA SADAT, BLOCK & TEHSIL: MEERGANJ, DISTRICT: BAREILLY (UTTAR PRADESH)-243504

BY

Dr Yogendra Kumar Verma

MARCH 2024

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ACKNOWLEDGEMENT

Dr Yogendra Kumar Verma places on record its sincere thanks to the Management of M/s Dhampur Bio Organics Limited (Unit: Meerganj, Division: Sugar) for entrusting the task of conducting Water Audit assignment at Dhampur Bio Organics Limited (Unit: Meerganj, Division: Sugar) in line with CGWA Notification dated 24/09/2020.

We are grateful to Mr. Sanjay srivastava (Unit Head) and his team for his continuous support and guidance during the execution of the assignment. We also extend our sincere thanks to other team members for their full-fledged support in execution of the assignment.

Dr Yogendra Kumar Verma and his audit team is indebted to the EHS department team and process team of M/s Dhampur Bio Organics Limited (Unit: Meerganj, Division: Sugar) for showing keen interest in the water audit and the wholehearted support and cooperation during the conduct of the field study, without which the study would not have steered to its successful completion.

It is well worthy to mention that the efforts being taken and the enthusiasm shown by all the personnel towards water and energy conservation are really admirable.

Dr Yogendra Kumar Verma

Certified Water Auditor, CGWA

CERTIFICATE

I certify that following:

- The report is based on the data collected at site during Audit and information provided by M/s Dhampur Bio Organics Limited (Unit: Meerganj, Division: Sugar) Village: Nagaria Sadat, Block & Tehsil: Meerganj, District: Bareilly (Uttar Pradesh)-243504. The data collection has been carried out diligently and truthfully.
- All data measuring devices used by the team are in good working condition, have been calibrated and have valid calibration certificate from the authorized approved agencies and tampering of such devices has not occurred.
- All reasonable professional skill, care and diligence have been taken in preparing the water audit report and the contents thereof are a true representation of the facts and figures.

भारत सरकार / Government of India
जल शक्ति मंत्रालय / Ministry of Jal shakti
जल संसाधन, Dept. of Water Resources, River
नदी विकास एवं गंगा संरक्षण विभाग / Development & GR
केन्द्रीय भूमिजल बोर्ड / Central Ground Water Board

राजीव गांधी राष्ट्रीय भूमि जल प्रशिक्षण एवं अनुसंधान संस्थान, रायपुर
Rajiv Gandhi National Ground Water Training & Research Institute, Raipur

Certificate

Certificate No: RGI/WA/2023 - 12

This is to certify that Mr./Ms. Dr. Yogendra Kumar Verma
S/o. Lakhan Lal Verma has successfully completed the training course w.e.f. 20.03.2023 to 26.04.2023 and is certified as Water Auditor to prepare the Water Audit Reports for industries as a part of compliance condition of the No. Objection Certificate (NOC) issued by Central Ground Water Authority, Ministry of Jal Shakti, Govt. of India for ground water abstraction as per Gazette Notification dated 24.09.2020.

Validity Period : Five years from the date of Issue
Date of issuance : 19/06/2023

पाठ्यक्रम निदेशक
Course Director
आरजीएनजीडब्ल्यूटीआरआई
RGNGWT&RI

क्षेत्रीय निदेशक
Regional Director
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RGNGWT&RI

सदस्य
Member (East)
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RGNGWT&RI

website : cgwb.gov.in, cgwa-noc.gov.in

ABBREVIATIONS

A	Ampere
AC	Alternating Current
Avg.	Average
CGWA	Central Ground Water Authority
CGWB	Central Ground Water Board
CWC	Central Water Commission
KL	Kilolitre
KV	Kilovolt
kVA	Kilo Volt Ampere
KVAr	Kilo Volt Ampere Reactive
kW	Kilowatts
kWh	Kilowatt Hour
Lit	Liters
LPCD	Liter Per Capita per Day
LPM	Liters per minute
M orm	Meter
Max.	Maximum
mbgl	Meters below ground level
Min.	Minimum
MT	Metric Ton
No.	Number
OHT	Overhead Tank
PF	Power Factor
RO	Reverse Osmosis
SWC	Specific Water Consumption
LPS	Low Pressure Switch
HPS	High Pressure Switch
ETP	Effluent Treatment Plant
V	Voltage
WDS	Water distribution station.
WTP	Water Treatment Plant
RWH	Rain Water harvesting

EXECUTIVE SUMMARY

Given the above scenario of prevailing resource challenge, accelerating over time, progressive management of M/s Dhampur Bio Organics Limited (Unit: Meerganj, Division: Sugar) Bareilly is very keen to do water audit of their premises. To get benefit of water saving projects, management of M/s Dhampur Bio Organics Limited (Unit: Meerganj, Division: Sugar) Bareilly awarded the task of water audit of its premises to Dr Yogendra Kumar Verma (Certified water auditor from CGWA).

This report is an attempt of Dr Yogendra Kumar Verma to provide an overview ofthe water distribution system and water usage at Dhampur Bio Organics Limited (Unit: Meerganj, Division: Sugar). The report also highlights the major water sources, consumption area, wastewater treatment facilities and available water saving opportunities in the plant. A set of recommendations which will assist in improving water efficiency has also been highlighted in this report. This report has emerged after a detailed water audit conducted by Dr Yogendra Kumar Verma in plant from 18.03.2024 to 19.03.2024.

Project Title	**Dr Yogendra Kumar Verma** **Report Number:**
Water Audit at M/s Dhampur Bio Organics Limited (Unit: Meerganj, Division: Sugar) Village: Nagaria Sadat, Block & Tehsil: Meerganj, District: Bareilly (Uttar Pradesh)-243504.	
Client	
M/s Dhampur Bio Organics Limited (Unit: Meerganj, Division: Sugar)	
Contact Person:	
Mr. Sanjay Srivastava (Unit Head)	
Date of Audit	**Source of Water**
18.03.2024 to 19.03.2024.	Ground Water from Bore wells
Date of this Report	**Date of Approval**
***Work Carried out by**: (Team Composition)*	**Dr Yogendra Kumar Verma** **Mr Satyendra Singh (Associate)**
Final Report Approved	Date :

- M/s Dhampur Bio Organics Limited (Unit: Meerganj, Division: Sugar) group is engaged in manufacture of sugar, cogeneration and ethanol. The plant is located in an area of Village: Nagaria Sadat, Block & Tehsil: Meerganj, District: Bareilly (Uttar Pradesh)-243504. The plant has NOC to withdraw **730 KL/day** of water from four (04) bore wells. At present, approximately **394 KL/day** (from January-2023 to December-2023) of water is used for the industrial process, domestic, utility and drinking purpose only, of which all water is met from four (04) bore wells. The stage of groundwater development in Meerganj Block as reported by CGWB (assessment year: 2020) is **66.029 %** and Block wise Ground Water Resource Assessment – 2020 by CGWB puts Meerganj Block in the category of Safe. Meerganj Block has been identified as non - notified block by CGWA.

- M/s Dhampur Bio Organics Limited (Unit: Meerganj, Division: Sugar) has only one source of water to the plant - Ground water through four (04) no. of Bore wells which are being operating continuously to meet the demand of the plant. Each source and bore well is fitted with individual electromagnetic flow meter.

- The total water available at Dhampur Bio Organics Limited (Unit: Meerganj, Division: Sugar) is **70851 KL/year i:e 394 KL/day (Jan-2023 to Dec-2023**), **(considering @ 180 days)**. The water consuming areas are co-gen(utility) which accounts for **61.71% (43721 KL/year**), domestic which accounts for **13.5% (9563 KL/year)**, process (chemical preparation) which accounts for **20.72% (14677 KL/year)** and leakages/unaccounted loss is **4.08 (2890 KL/year).**

- The total ground water abstraction from Jan-2023 to Dec-2023 is **70851 KL/year i:e 394 KL/day**, this shows that Water Audit at M/s Dhampur Bio Organics Limited (Unit: Meerganj, Division: Sugar) Village: Nagaria Sadat, Block & Tehsil: Meerganj, District: Bareilly (Uttar Pradesh)-243504. comply with the NOC for ground water withdrawal of **730 KL/day**.

- The audit team calculated the per KL cost of Raw water. The Rs./KL cost of Raw water is **2.5** From Jan-2023 to December-2023. The expense towards energy consumption at borewell is considered for calculating raw water cost.

- Water Audit at M/s Dhampur Bio Organics Limited (Unit: Meerganj, Division: Sugar) Village: Nagaria Sadat, Block & Tehsil: Meerganj, District: Bareilly (Uttar Pradesh)-243504.has done calibration of the Bore Well and ETP Inlet and Outlet flow meters

installed in the plant. Calibration Certificates are attached as **Annexure-A.**

- During study, measurements of Cooling Tower, Temperature/relative humidity of supply air, inlet/outlet temperature of water and power consumption of fans has been carried out. The Process colling Tower is giving satisfactory results, however the effectiveness of Power Plant Turbine Cooling Tower is in the lower side. The CT effectiveness is dependent onthe ambient conditions, but despite that, the effectiveness should normally in the range of 60% & above. The evaluated CT effectiveness was in the range from **56% to 66%.**

- The audit team took the flow and pressure readings from their own instruments and found that the pressure gauge reading of Bore Well # 2 was having error. Here we recommend replacing the pressure gauge at the discharge line of Bore Well # 2.

- During measurements, it was observed that BW # 2 is consuming **45kW** against the rated power of **42kW**. Here we recommend checking the pump to avoid any overheating or pump malfunctioning.

- The Audit team calculated the Rs. /KL cost of DM Water. The Rs. /KL cost of DM waterfor the year 2023 is **55.23 Rs/KL.** The expenses towards energy consumption at RO and PSF, chemical costs and manpower cost are considered for calculating the total cost fortreatment.

- The Audit team calculated the Rs. /KL cost of ETP Water. The Rs. /KL cost of ETP water for the year 2023 is **30.00 Rs/KL** the expenses towards energy consumption at ETP plant, chemical costs and manpower cost are considered for calculating the total cost for treatment.

- The average treated water ETP in the crushing season 2023 is **928.93 KLD**. ETP plant has an installed capacity is **2200 KLD**, whereas the treated average wastewater is **42.19 %** of the rated capacity. Therefore, the effective capacity utilization of ETP is **42.19 %**.

- The maximum (worst case) ground water requirement for the Dhampur Bio Organics Limited (Unit: Meerganj, Division: Sugar) is **660 KLD** however plant has obtained the NOC of water quantity **730 KLD** from Four Tube wells and NOC for the same has

been granted, and this total requirement of fresh water is fulfill by Ground water through 04 Numbers of bore-wells within the plant site. The ground water withdrawal will be within 660 KLD only, and should meet out by all four tubes well.

- **Tube Well # 1:** Plant has a NOC to withdraw **55800.0 KL/year** from tube well # 1 with the Maximum Allowable Rate of Withdrawal of **155 m3/hr** and Running hour not exceeding 2hrs.
- **Tube Well # 2:** Plant has a NOC to withdraw **55800 KL/year** from tube well # 2 with the Maximum Allowable Rate of Withdrawal of **155 m3/hr** and Running hour not exceeding 2hrs.
- **Tube Well # 3:** Plant has a NOC to withdraw **3650 KL/year** from tube well # 3 with the Maximum Allowable Rate of Withdrawal of 0**5 m3/hr** and Running hour not exceeding2hrs.
- **Tube Well # 4:** Plant has a NOC to withdraw **18000 KL/year** from tube well # 4 with the Maximum Allowable Rate of Withdrawal of **50 m3/hr** and Running hour not exceeding2hrs.

- The NOC has been issued by UPGWD (Uttar Pradesh Ground Water department) vide letter no **1. NOC038517. 2. NOC010362. 3. NOC0037781 4. NOC033613.** No new/additional ground water abstraction structures to be constructed for this purpose without prior approval from UPGWD. As per data provided by the plant, the total ground water abstraction in the year 2023 is **2023 is 70851KL/year (BW#1 = 15449KL and BW#2 = 45543KL and BW#3 = 2255KL, BW#4 = 7604KL) i:e 394 KL/day (considering @ 180 days)** which is less than the NOC of **730 KLD** issued to plant. This shows that Dhampur Bio Organics Limited (Unit: Meerganj, Division: Sugar) comply with the NOC for ground water withdrawal of **730KLD** i.e.; 133250.0 KL/year. NOC copy for Tube Well # 1, 2, 3 & 4 are attached as **Annexure-B**.

- No change of location, design, rate of withdrawal and pumping device in respect of the proposed well as indicated at SL (2) and (3) of this certificate shall be made without prior permission of the Competent Authority. Any deviation in this regard shall lead to cancellation of this authorization. Audit team has checked the running parameters of both the bore wells. Both the bore wells are operated as per the NOC.

- For the purpose of measuring and recording the quantity of ground water extracted, every said user shall affix digital water flow meters (conforming to BIS/ IS standards) having telemetry system in the abstraction structure, which record rate and quantum of

extraction, at outlet of pumping devices and it shall be presumed that the quantity recorded by the meter has been extracted by the said user, until the contrary is proved. The rate ofextraction of ground water from the well shall not exceed to the recorded rate from water Meters. Dhampur Bio Organics Limited (Unit: Meerganj, Division: Sugar) has installed digital flow meter with telemetry system on the existing Four (04) bore well and maintaining the data on daily basis.

- Construction of piezometers and installation of digital water level recorders with telemetry shall be mandatory for user. Depth and zone tapped of piezometer should be commensurate with that of the pumping well. The data, obtained from digital water level recorders shall be made available to UPGWD (Central Ground Water Authority) on monthly basis. Piezometer is abore well /tube well used only for measuring the water level by lowering the tape/ sounder or automatic water level measuring equipment. It is also used to take water sample for water quality testing whenever needed. Since the plant has NOC to withdraw 730 KLD from Three tube wells, Dhampur Bio Organics Limited (Unit: Meerganj, Division: Sugar) must install two piezometer with telemetry system. Plant has installed four (04) Piezometer with telemetry system to execute the ground water regime. Here we recommend that plant must install another piezometer with telemetry system to comply from the NOC received from CGWA. Dhampur Bio Organics Limited (Unit: Meerganj, Division: Sugar) must follow the above mentioned points.

- The ground water quality has to be monitored twice in a year during pre-monsoon (May/June) and post-monsoon (October/November) periods. Quality may be got analyzed from NABL approved lab (Environmental and Technical Research Centre). Besides, one sample (1 lt. capacity bottle) to the concerned Director, Ground Water Department, Uttar Pradesh, for chemical analysis. The audit team has checked and verified all the water quality test reports. All of the reports comply with the environmental factors related to water uses and discharge. (Attached separately in **Annexure-B**).

- A Permanent display board should be installed at piezometer/Tube wells site for providing the location, piezometer/ tube well number, depth and zone tapped of piezometer/tube well for standard referencing and identification. M/s Dhampur Bio Organics Limited (Unit: Meerganj, Division: Sugar) has provided display boards on all the locations as per the NOC.

- There is **2.65 hectare** Roof top area in Dhampur Bio Organics Limited (Unit: Meerganj,

Division: Sugar). Water recharge through roof top within premises - **27255.25KL/Year**. Total water recharge by adoption of pond of area – 0.873Ha in nearby village 47142 KL/Year.

- Dhampur Bio Organics Limited (Unit: Meerganj, Division: Sugar) has developed a well mentioned drip irrigation system in the factory command area in keeping the view of ground water saving and better yield of the crops. The drip irrigation technology is highly efficient in water saving as well as higher production of the crops. M/s Dhampur Bio Organics Limited (Unit: Meerganj, Division: Sugar) started his journey of drip irrigation from 2020 with 80 hectare area and now in 2023 it is reached upto 448 hectare. **The water saving from 2021 to 2023 is 6429456 KL**. This show that the management of Dhampur Bio Organics Limited (Unit: Meerganj, Division: Sugar) is very keen in water saving.

- During the site, survey leakages were found at some of the locations. All the leakages were quantified with the help of beaker or any other form. During the field trials, **0.884 KLD** water leakages were found at **07** different locations. Approximately **159.12 KL/year of** water can be saved by arresting all the leakages in the plant. It is recommended to stop all the leakages points by taking necessary action.

- The audit team has conducted the flow sample measurement on existing taps installed in toilets wash basin of General Toilets Near Mill House, Canteen, Production office, store, cane yard and guest house Toilets to identify the water saving potential in faucets. It is observed that average flow of existing tap/faucets at toilet washbasin faucet is 7 Litters per Minute (LPM). Faucets flows can easily be reduced without affecting the comfort of the water user. Therefore, based on sample flow measurement, we recommend installing nozzle spray flow regulator faucets in General Toilets Near, Mill House, Canteen, Production office, store, cane yard and guest house Toilets faucets. This will result in impressive savings of around **50-60 percent** of faucets water use. Total 25 nos. of wash basins faucets in General Toilets Near, Mill House, Canteen, Production office, store, cane yard and guest house Toilets were found where average flow is 7 Liters Per Minute (LPM). We recommend installing nozzle spray flow regulator faucets in these 25 wash basin faucets to reduce the flow from **7 LPM to 3.5 LPM**. The daily water used in this 25-wash basin is **0.388 KL/Day** It is assumed that by replacing old faucets with new nozzle spray flow regulator faucets, **0.194 KL/Day** of water can be saved in hand wash. Total **70.956 KL/year** of water will be saved by adding nozzle spray flow regulator faucets on existing 25 taps. The resultant benefit in terms of energy saving workout is Rs.

177.39/year with an estimated investment **of Rs. 5000** with the simple payback period of **338 months**.

- The audit team has conducted the survey of Toilet near Cane Yard, Store House, Guest House, Canteen Toilet, Driver Waiting Room. There are total 15 flush tanks installed in toilet, having old system of flushing by pressing push button having water consumption of 6 Litre/Flush. A dual-flush toilet is a variation of the flush toilet that uses two buttons or handles to flush different levels of water. A significant way to save water in buildings is to replace single- flush toilets with dual flush toilets. The standard dual-flush toilets use six Litters of water on full and three Litters on a half- flush. Replacing old toilets will result to a reduction of toilet water consumption. More cost- effective results can be achieved by replacing only the toilet trim system. It is assumed that by reducing the flow with dual flush cistern, 50% i.e. **0.18 KL/Day** of water can be saved in flush tanks. Total **65.7KL/year** of water will be saved by adding dual type flush tanks in existing 15 tanks. The resultant benefit in terms of energy saving workout is Rs. **164.25/year** with an estimated investment of Rs. **15,000** with the simple payback period of **1095** months.

Summary of Implementation Plan

Sr. No.	Section/Area	Key Observations	Recommendations	Annual Water Savings (KL/year)	Annual Monetary Savings (Rs.)	Investment(Rs.)	Pay-back Period (Months)
I	Total Bore well Water Intake			70851			
II	Bore well Water Saving Achievable			295.77			
	Option 1: Short Term Benefits						
1	Total Leakage in Plant	Arrest all leakage points	We recommend arresting all the leakage points. Arresting these leakage points total 1173 KL/year of water will be saved.	159.12	397		
	Option 2: Long Term Benefits						
2	Faucets in General Toilets Near Mill House, Canteen, Production office, store, cane yard and guest house.	Total 25 nos. of wash basins faucets in General Toilets Near, Mill House, Canteen, Production office, store, cane yard and guest house Toilets were found where average flow is 7 Liters Per Minute (LPM).	We recommend installing nozzle spray flow regulator faucets in these 25 wash basin faucets to reduce the flow from 7 LPM to 3.5 LPM. The daily water used in this 25-wash basin is 0.388 KL/Day.	70.956	177.39	5000	338.0
3	Flush Tanks in Toilet near Cane Yard, Store House, Guest House, Canteen Toilet ,Driver Waiting Room	The audit team has conducted the survey of Toilet near Cane Yard, Store House, Guest House, Canteen Toilet, Driver Waiting Room. There are total 15 flush tanks installed in toilet, having old system of flushing by pressing push button having water consumption of 6	A dual-flush toilet is a variation of the flush toilet that uses two buttons or handles to flush different levels of water. A significant way to save water in buildings is to replace single- flush toilets with dual flush toilets. The standard dual-flush toilets use six Litters of water on full and three Litters on a half- flush.	65.7	164.25	15000	1095

		Litre/Flush.					
4	Regularly calibrate & maintain existing water flow meters	It was observed that the existing bore well meter are installed and calibrated	It is suggested to continue to calibrate and maintain the existing flow meters.	Monitoring Water consumption patterns	Efficient Water Accounting	Low	-
5	Water Flow Meters	It was observed that the plant has installed water flow meter in bore well. But water flow meter is not in proper line location.	It is suggested to re installed the mtr at bore well at right location (after the bore well discharge)	This will help to know the right & actual flow value	Efficient Water Accounting	Low	-
6	Maintain logbook of daily groundwater abstraction	It was observed that the plant is maintaining data of daily groundwater abstraction	The proposed digital flow meter with telemetry will be equipped with online data recording facility	It will help to know the daily water consumption	Efficient Water Accounting	Low	-
7	Regular payment of applicable groundwater abstraction charges	It was observed that plant team is regularly paying the applicable ground water charges to concern authority	It is suggested to maintain the same				
8	Ensure to comply with the NOC conditions to avoid any penalty	It was observed that plant team is meeting all applicable compliance	It is suggested to maintain the same				
9	Borewell Water Flow meters	Existing Borewells was not having concrete structure as per CGWA guidelines	We recommend to construct the proper concrete structure as per CGWA Guideline	-	-	-	-

10	Periodically conduct 'Water & Wastewater Audit'	Plant has formed a cell for assessment of potential for water & wastewater management in the plant for water saving & wastewater management.	Conduct periodic 'Water Audit' at least once in 2-3 years either by an Experienced external Audit Team to assess the efficiency of water usage in processes; reduce water losses in the system and optimize costs & energy consumption.	Efficient water & wastewater management	Evolveigschemes leading to water and associated cost savings	Low	
11	Enhance Training and Awareness of the Employees at all Levels and Placing 'Water Saving 'posters/Slogans at various Locations	Plant is regularly conducting Training and Awareness of the Employees, events to promote water conservation like celebration of world water day, world environment day" and Placing 'Water Saving' Posters/Slogans at various Locations.	Maintain the system and suggested to keep continue the water conservation activities and promotion in the plant.	Reduction in Freshwater Use due to awareness & training	Water cost savings due to reduced water use	Low	-
TOTAL				**136.65**	**341.64**	**20000**	**1433**

CHAPTER 1
INTRODUCTION

1. INTRODUCTION

Human activities consume and pollute lot of water. At a global scale, most of the water use occurs in agricultural production, but there are also substantial water volumes consumed and polluted in the industrial and domestic sectors (WWAP, 2009).

Global changes like population growth, climate variability, ever-expanding industrialization and urbanization — often combined with pollution — severely affect water availability and lead to chronic water shortages in a growing number of regions. India has been successful in the past to meet such water requirements for different usages with a phenomenal development of water resources. However, preserving the quality and availability of fresh water resources has now become a pressing environment challenge.

Water is an essential precondition for life, and according to the UN it is a human right to have access to clean water. However, in India millions of people are living without direct access to safe water and based on the rapid population growth coupled with the fact that the water reserve is finite, it will be a very valuable and scarce resource within only a few years. In this light, there is an urgent need for decision makers to act in order to improve the conditions for effective use and supply of water to the Indian people now and in the future.

Under the Indian Constitution and in our federal democratic set up drinking water comes within the domain of the State Governments (Provincial Governments). In fact, the 73rd Constitutional Amendment has gone a step forward. It mandates that responsibility for drinking water and sanitation services should be with Local Governments. Various States in India are at different stages of giving effect to this Constitutional mandate.

The Ministry of Urban Development has formulated Service Level Benchmarks (SLBs) in 2008 and circulated the same to the States for adoption. The SLBs include water conservation and management practices such as continuous water supply, 100% metering of water supply, sustainable tariffs and reduction in leakages to a level of 15% to 20%.

The National Water Policy – 2012 focuses on the need for publishing water accounts and water audit reports indicating leakages and pilferages. The policy recommends systems to evolve benchmarks for water uses for different purposes, i.e., water footprints, and water auditing to ensure efficient use of water.

National Water Mission (NWM) has been established by the Government of India with the objective of —conservation of water, minimizing wastage and ensuring its more equitable distribution both across and within States through integrated water resources development and management. The Government of India has also launched a Centrally Sponsored Scheme for Repair, Renovation and Restoration (RRR) of water bodies, which has

multiple objectives like comprehensive improvement and restoration of water bodies thereby increasing tank storage capacity, improved water use efficiency and increased availability of drinking water.

With its continuously declining per capita water availability (from about 5,177 m3 in 1951 to 1,654 m3 in 2007), India stands water stressed and is close to being categorized water scarce'. Water demand in India is expected to grow annually by 2.8 per cent to reach 1,500 bcm (by 2030) while the current supply is only about half (viz., 744 bcm). The Government of India, in its Intended Nationally Determined Contribution (INDC) submitted to UN Framework Convention on Climate Change (UNFCCC) in October, 2015, has committed to improve the water use efficiency by 20%, through regulatory mechanisms with differential entitlements and pricing. It further emphasizes the need to focus on integrated water resource management through water conservation, wastewater minimization, etc.

The notification dated 24/09/2020 from CGWA, all industries abstracting ground water in excess of 100KL/day shall be required to undertake annual water audit through CII/FICCI/NPC/PHDCCI/individual certified auditors and submit water audit reports within three months of completion of the same to CGWA.

Water audit is an effective management tool for minimizing losses, optimizing various uses and thus enabling considerable conservation of water. Thus, Dhampur Bio Organics Limited (Unit: Meerganj, Division: Sugar) at Village Nagaria Sadat, Block Tehsil. Meerganj, District Bareilly (Uttar Pradesh) , Bareilly has entrusted Dr Yogendra Kumar Verma for conducting water audit in their Sugar Unit premises.

This report discusses the existing water scenario of Dhampur Bio Organics Limited (Unit: Meerganj, Division: Sugar) and its potential water savings and how the basic water audit approach has been applied to water conservation in line with the guidelines of CGWA.

1.1 RATIONALE FOR WATER AUDIT

Water audit determines the amount of water lost from the water network/distribution system due to seepage, evaporation/leakage and other reasons such as theft, unauthorized or illegal withdrawals from the systems. Water audit improves the knowledge and documentation of the distribution system, and better understanding of what is happening to the water after it leaves the source point. Comprehensive water audit gives a detailed profile of the distribution system and water users, thereby facilitating easier and effective management of the resources with improved reliability. It helps in correct

Diagnosis of the problems faced in order to suggest optimum solutions. This leads to reduced water losses; improved financial performance; improved reliability of supply system; enhanced knowledge of the distribution; efficient use of existing supplies; better safeguard to public health and property; improved public relations; reduced legal liability and reduced

disruption etc. thereby improving level of service to customers. It is thus an effective tool for realistic understanding and assessment of the present performance level and efficiency of the service and the adaptability of the system for future expansion & rectification of faults during modernization.

1.1.1 Steps of Water Audit

Water Audit includes water supply and usage study, process study, system audit, discharge analysis and preparation of water audit report.

1.1.2 Water Supply and Usage Study

Water audit comprises preparation of layout of water sources, distribution network, and service/delivery points to water users and return flow of waste or excess water. The layout should contain locations and capacities of flow measurement devices installed at key points, sizes of different channels, and fittings in the water supply system, locations and particulars of flow control devices and history sheets of all measuring and control devices including pipes and fittings etc.

Dr Yogendra Kumar Verma (Certified Water Auditor) has carried out the water supply and usage study at Dhampur Bio Organics Limited (Unit: Meerganj, Division: Sugar), to understand the present water utilization pattern and projecting future requirement. Dr Yogendra Kumar Verma (Certified Water Auditor) also carried out a review of sustainable sources of water through rainwater harvesting and possible wastewater recycling at Dhampur Bio Organics Limited (Unit: Meerganj, Division: Sugar).

1.1.3 Process Study

Flow measurement devices were installed at all strategic points to calculate the water consumption at Dhampur Bio Organics Limited (Unit: Meerganj, Division: Sugar) in various activities such as supply to the Processing Units, Utilities, Domestic and Gardening.

Water quality of the distribution system needs to be monitored regularly at strategic points to find out the level and nature of contaminants present in the supplied water. The Dhampur Bio Organics Limited (Unit: Meerganj, Division: Sugar) has conducted the water quality test reports for Bore well (Raw Water), DM and RO Water. Audit team reviewed all test reports and found acceptable as the results are in compliance to various standards asrequired by SPCB.

Dr Yogendra Kumar Verma has carried out flow, pressure and power measurement of the bore well pumps to calculate the total water supplied to the different areas of the plant to understand the quantity of water received from ground and feed to the plant area.

Accordingly, discharge from various processing units and estimation of losses was also assessed.

1.1.4 System Audit

The current water usages and systems for water use are process, utility, gardening and domestic purpose need to be studied to check their operational efficiency and level of maintenance. The scope for any modification or up-gradation will depend on the status of existing systems. Measurement methodology from the intake point of the system through various sub-systems to the ultimate user points needs to be verified periodically for its suitability, efficiency and accuracy. Bulk metering should be done at the source, process area, water discharge etc. This will help in identifying the reaches of undue water wastage. The domestic wastewater return flows need to be studied for conformity to environment standards, possibility of recovery of valuable by-products and the opportunity for recycling of waste water.

Dr Yogendra Kumar Verma has carried out physical inspection of water distribution network/system of Bore Well Pumps, supply to various areas of the Plant, Domestic, ETP and Gardening to get their per day water consumption to arrive at per capita water consumption in Dhampur Bio Organics Limited (Unit: Meerganj, Division: Sugar).

1.1.5 Discharge Analysis

M/s Dhampur Bio Organics Limited (Unit: Meerganj, Division: Sugar) has installed one ETP of 2200 KLD, to treat the factory effluent generated in the plant. The audit team has conducted the study of ETP. The domestic effluent is being treated through the existing Sewage Treatment Plant.

1.1.6 Water Audit Report

A water audit can be accomplished on the basis of water allotted for a service and water actually utilized for that service. After assessing the loss of water and the efficiency of the system, steps needed for utilization of recoverable water loss and reuse may be listed. An effective water audit report may be purposeful in detection of water losses and improve efficiency of the system. Water audit of the system should be undertaken at regular intervals, at least on an annual basis. Dr Yogendra Kumar Verma water audit explains the losses of water in system and various management approaches for M/s Dhampur Bio Organics Limited (Unit: Meerganj, Division: Sugar) at Village: Nagaria Sadat, Block & Tehsil: Meerganj, District: Bareilly (Uttar Pradesh)-243504.

1.2 Brief Description about the Plant

M/s Dhampur Bio Organics Limited (Unit: Meerganj, Division: Sugar) is a sugar cane crushing unit with capacity 9000 TCD sugar Plant at Village: Nagaria Sadat, Block & Tehsil: Meerganj, District: Bareilly (Uttar Pradesh)-243504. DBOL was the first company in India to manufacture sulphurless refined Sugar. DBOL has the ability to produce refined sugar both during the season wherein the sugar from the sugarcane is first used to manufacture raw sugar and subsequently refined to produce refined Sulphur less sugar and in off-season when coupled with cogeneration DBOL can use raw sugar procured from outside to produce refined sugar.

1.2.1 Process Description

Sugar manufacturing process involves mainly seven stages as mentioned below

- Weighing of sugar cane
- Crushing of Sugarcane
- Juice clarification (double sulphitation)
- Evaporation & boiling
- Crystallization
- Curing
- Grading and bagging

Cane weighment and unloading system

Harvested Sugarcane is brought to the factory by trucks trailers and bullock carts. The factory will have 24 out station purchase centers and one local centre at the factory gate. All the purchase centers will be provided with suitable platform type computerized electronic weigh bridges to weigh the cane. There will be separate weigh bridges for cart cane weighing and truck/trailer cane weighing at the factory gate before unloading the cane on to the conveyors.

The received cane in carts and trailers in the purchase centers will be weighed. The cane received by trucks will be directly unloaded by hydraulic truck tipplers provided at the hand end of the auxiliary cane carrier. Cane weights are recorded and in the statements issued to the cane suppliers with the weight, total value payable etc. by a computerized system.

Cane Preparatory system & Milling System

The cane carrier is a slat type conveyor width dragged by three strands of roller chains of sturdy construction moving on well aligned flat rails. The system will be driven by suitable variable speed drive motors to adjust the speed between 3m/min. to 10m/min. The main cane carrier will be of 40-60m horizontal length and 20m inclined length of 12 Deg. and 7 Deg. slopes with a loading depth of 1.2m at the horizontal length. One cane leveler set with 48 knives driven by 2 x 150 KW, 600 rpm synchronous speed sling ring motor of 15% slip and an adjustable clearance of 250mm to 300mm between the tip of knives and the carrier slat will be provided. A

heavy duty swing hammer type fibrizer with 120 hammers and box type anvils driven by 2 Nos. 600 KW slip ring motors of 15% slip running at 800 rpm is considered as a cane preparatory equipment.

Milling System

The prepared cane is crushed in the mills will be driven by DC motors of connected to the rollers through speed reduction gears to enable the rollers to run at 3 rpm to 4 rpm speed. The fibrized cane will be fed to the crusher through a donnelly chute and under feed rollers and the extracted juice is screened through a rotary screen to remove fine bagasse particles. The bagasse after extraction of juice will pass through successive mills through rake type elevators and Donnelly chutes to enable maximum extraction of juice from the cane. Imbitions water at 40 Deg. C will be added after the penultimate mill to extract the last traces of juice in the bagasse. The bagasse coming out of the fifth mill will be used as fuel for generation of steam which in turn will be used for production of electrical power and supply of process steam.

Juice Clarification (Defication Process)

The mechanism of Phosphatation is primarily the flocculation of impurity particles (Bennett). The majority of colouring matter & colloids by nature are negatively charged and so the addition of cations such as calcium neutralises these charges and allows flocculation to take place. The anionic colour bodies are therefore most effectively removed by this process, and some soluble colours are absorbed by the tri-calcium phosphate. The open and bulky nature of the precipitate allows micro-flocs to be enmeshed in the precipitate mass. Larger particles must be screened because they do not float in the flotation clarifier. This process consists of adding phosphoric acid to hot raw melt (80-85 deg.c) at 0.02 – 0.05% P2O5 on brix depending on the sugar quality, i.e. colour and suspended solids. Lime in the form of lime sucrate/ low brix (2.0-2.5 be) lime slurry is added almost simultaneously. The reaction produces a precipitate of tricalcium phosphate, to which is added a flocculent to coagulate it. $3Ca(OH)2 + 2 H3 PO4 = Ca3(PO4)2 + 6H2O$ The precipitate is very fine and cannot be easily filtered; therefore, the liquor is aerated by dispersed air and subject to flotation in a clarifier. The precipitate and other debris are scraped/skimmed off as a scum. The scum is de-sweetened in several ways, the most popular of which is a series of two or three counter current clarifiers. The clear liquor underflow is led to one or two filtration processes where any ca carry over is removed.

Evaporation, Boiling & Crystallisation

Clear juice at a pH level of 7 from the clarified passed to the first effect of the quintuple effect evaporator at about 103°C to 105°C through a juice heater. The first evaporator vessel will be a thin film long tube rising film type evaporator (semi-kestener) of modern design with provision of efficient internal and external vapour scrubbing designs. Exhaust inlet, level indicators, samplers, condensate outlets, etc. Suitable desuperheating system for exhaust steam and

pressure reducing desuperheating provision for live steam bleeding into exhaust will also be provided. The targeted evaporation percentage in the quintuple effect will be about 78 to 80.

Syrup Clarification

The syrup coming out of the evaporator will be maintained between 55 Brix to 60 Brix. Since the production of quality acceptable to international standards is very essential these days an automatic syrup clarification system of proven technology will be provided by which it will be possible to manufacture sugar as per the requirement upto 50 ICUMSA. For required sugar production below 50 ICUMSA, a smaller capacity refinery as per our requirement may be planned at a later date as an extension of the plant.

Vacuum Pan Boiling

- Total automation of the boiling operations.
- Totally automatic continuous pans for B&C boiling.
- Vacuum crystallizers for storage of B-grain, C-grain and A-footing.
- Open seed crystallizer for dry seed and B-seed.
- Conventional water cooled crystallizers for B&C masscuite storage and air cooled for A massescuite. B&C crystallizers will be of continuous cooling type.
- Slurry graining for B&C.
- B-Seed or dry seed for A-footing as per needs.
- External save all for all pans.
- Automated injection and spray system to reduce power consumption at this station to 2.5 KW/t/hr at peak crushing rates.
- Final molasses purity less that 29%.

Curing, Drying, Grading and sugar bagging

The crystal sugar developed in vacuum pans and nurtured in crystallizers is separated as white crystals from the mother liquor surrounding it. The mixture of sugar crystals and the another liquor which attains the name as massecuites and the spun in high speed centrifugal machines.

A-massecuite from which the commercial white sugar is separated is cured in modern, fully automatic, high speed, batch type, flat bottomed, plough discharging centrifugals driver by thyristor-controlled D.C. motors of 1440 rpm. The sugar will be discharged into a plain tray grass hopper conveyer at the bottom from where it will be conveyed to fluidized bed sugar drier. The dried sugar after cooling in the hopper will be elevated by bucket elevators to a vibrating screen assembly above the sugar bins. The factory proposes to make 85% and above of M-size crystals as per ISS, S-Size crystals 10% and other Sizes of 5%. The colour will be 31 plus which is the highest as per ISS. The sieved sugar will be stored in the sugar bins according to the grades and bagged in 50 Kg/100 Kg packing in automatic sugar net weighing machines kept at the bottom of the sugar bins, stitched by machines and conveyed to the warehouse through belt conveyors where they are stocked. The B-massecuite and C-massecuites are cured

in continuous centrifugal machines. The B-sugar after sufficient washing in centrifugals and with a purity of not less than 98% is taken back to the pan station as seed for A-massecuite some times and excess will be completely melted.

The C-sugar coming out of C-continuous centrifugal machines is magmised in a mingler beneath the machines and cured once again in a subsequent continuous centrifugal machine known as C-after worker.

The sugar from the C-after worker centrifugal which will be of about 98% purity is completely melted and taken to the pan floor for boiling with A-massecuite. Every stage of operation will be automated and integrated through DCS control system to ensure best process controls, efficient operations and quality outputs.

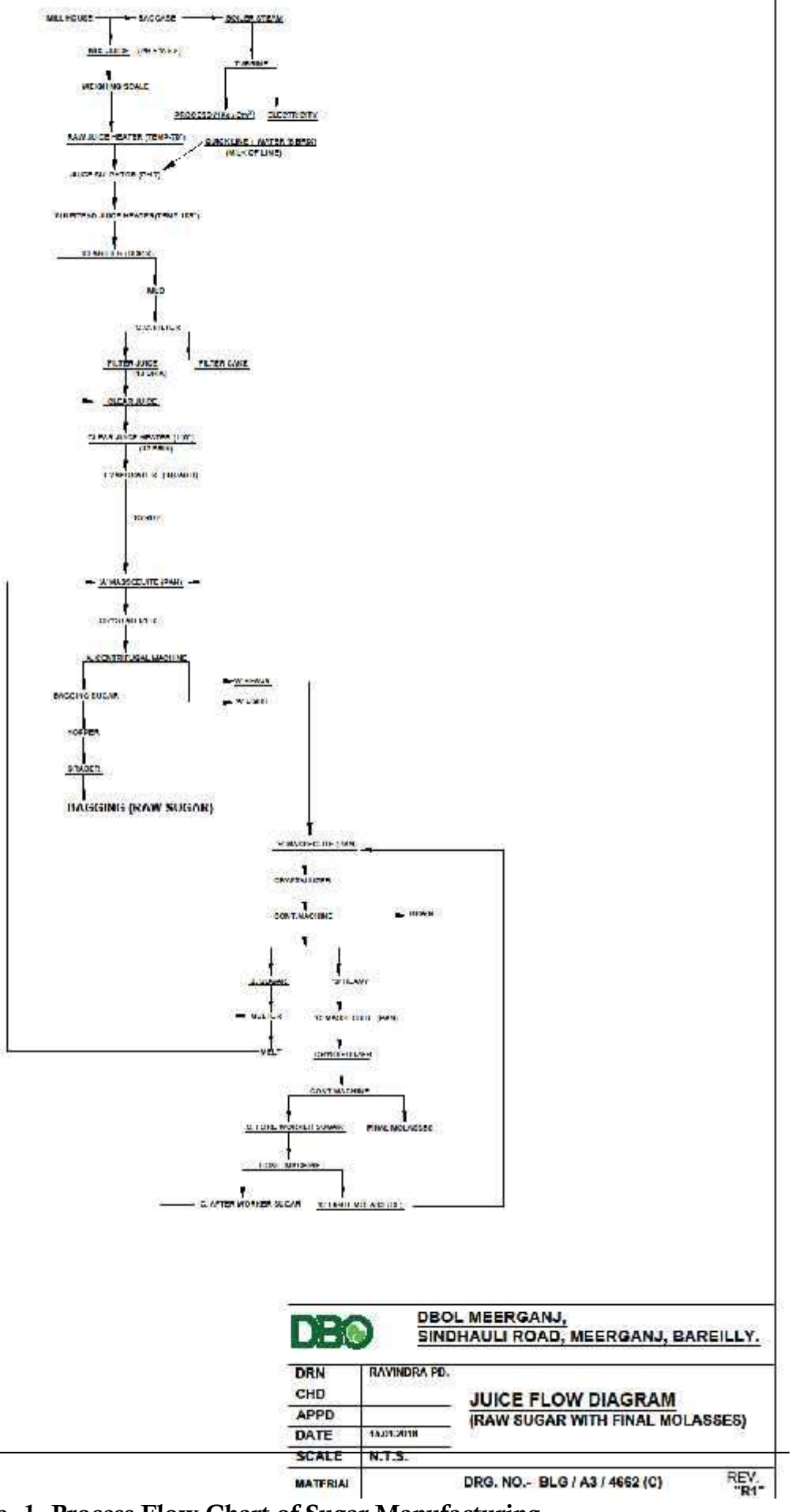

Figure- 1, Process Flow Chart of Sugar Manufacturing

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CHAPTER -2
SCOPE OF WORK

The main objective of the study was to identify the water uses & water saving opportunities and to demonstrate water conservation at M/s Dhampur Bio Organics Limited (Unit: Meerganj, Division: Sugar), Scope of work of the study includes the following:

- On-site training and discussion with facility manager and personnel
- Water system analysis and Quantification of base line water map
- Water use Monitoring and measurements using pressure and flow meter.
- Quantification in efficiencies and leaks in the water system
- Quantification of water quality load sand discharges
- Quantification of variability in flow sand quality parameters
- Strategies for water treatment and re use or erect use
- Development of detailed water circuit diagram and water balance of the facility
- Mapping of water quality requirement to develop 'recycle 'and 'reuse' opportunities
- Developing Water consumption and wastewater generation pattern
- Estimating Specific water use and conservation potential
- Develop & maintain monthly water extracted from bore wells, water level, water quality etc.
- Calculation of Rainwater Harvesting Potential for the site and assessment of the existing structures
- Evolving Water saving opportunities with method of implementing the proposal with
- Description and figures related to water management schemes
- Investment required for water saving schemes/Cost Benefit Analysis
- Submission of water audit report & its presentation at site (if required)

Following opportunities would also be assessed for Industries for water conservation

- Setting up of norms for water budgeting
- Modernization of industrial process to reduce water consumption
- Recycling water with circulating cooling system
- Cooling water approach which can result in five folder diction in blow down when compared to traditional chemical treatment
- Reduction in reuse of de-ionized water by eliminating some plenum flushes, converting from a continuous flow to a intermittent flow system and improving control on the use
- Use of waste water for gardening
- Proper processing of effluents to adhere to the norms of disposal

Dr Yogendra Kumar Verma has been entrusted to conduct Water Audit of Dhampur Bio Organics Limited (Unit: Meerganj, Division: Sugar). In determining the water audit scope, Dr Yogendra

Kumar Verma has considered the extent and boundaries of the Installations. This report aims at portraying the water audit details and the outcome along with recommendations for Dhampur Bio Organics Limited (Unit: Meerganj, Division: Sugar).

CHAPTER 3
METHODOLOGY OF STUDY

3.0 Methodology of the Study

The following step by step methodology and approach were adopted while carrying out the Water Audit at M/s Dhampur Bio Organics Limited (Unit: Meerganj, Division: Sugar). Dr Yogendra Kumar Verma team visited Dhampur Bio Organics Limited (Unit: Meerganj, Division: Sugar) from 18.03.2024 to 19.03.2024. for the field measurement and conducting the audit. The broad methodology adopted for the Water Audit at Dhampur Bio Organics Limited (Unit: Meerganj, Division: Sugar) is furnished below.

- Preliminary discussions with plant personnel and observations in all water-consuming areas.
- Data collection through discussions, past records, specifications.
- Field studies in each of the areas involving:
- ✓ Performance trials.
- ✓ Measurement of flow parameters, pressure, power wherever possible using portable instruments such as ultrasonic flow meter, pressure gauge and power analyser.
- Identification of water conservation options on short, medium & long terms.
- Identification of Investment grade projects in the plant for detailed analysis towards implementation
- Preparation, discussion and submission of report to the management.

The study focused on improving water use efficiency and identifying water saving opportunities. The analysis included simple payback calculations where investments are required to be made to implement recommendations, to establish their economic viability.

The audit study made use of various portable instruments for carrying out various measurements and analyses. Dr Yogendra Kumar Verma has a wide array of latest, sophisticated, portable, diagnostic and measuring instruments to support our energy audit investigations and analyses. The specialized instruments that were used during the water audit in

- Ultrasonic water flow meter
- Pressure Gauge
- Load Managerclude:

During the audit, there was continuous interaction between the audit team and facility personnel, to ensure that the suggestions made are realistic, practical and implementable to allow for possible concurrent implementation. The broad methodology adopted for the Water Audit at Dhampur Bio Organics Limited (Unit: Meerganj, Division: Sugar) is furnished below.

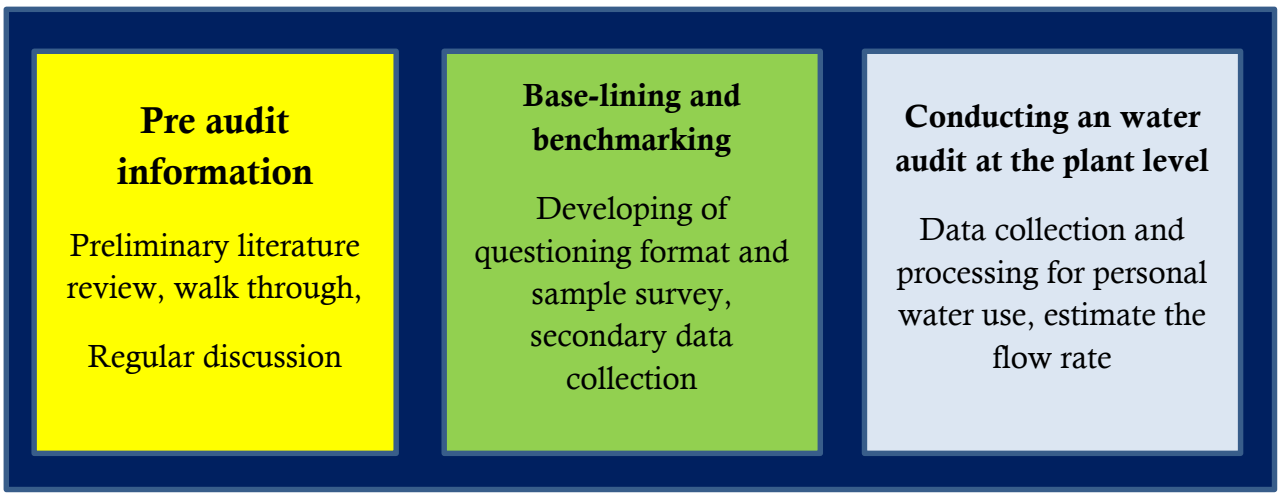
3.2 Pre Audit Information

- Preliminary literature review of concepts and methodologies related to water audit for utility, facilities and households.
- Walk through the entire Plant to understand the nature of water uses and the systems installed in the plant.
- Discussion with the administrative officers, pump operators, housekeeping and kitchen employees on the various water uses during the day and the source of water.

3.3 Base-Lining and Benchmarking

The water audit for M/s Dhampur Bio Organics Limited (Unit: Meerganj, Division: Sugar) included both primary and secondary data collection for various identified water uses. Primary data collection included the following components:

- Development of questionnaire format for individual water use, process area, utility, domestic and gardening.
- Sample Survey of M/s Dhampur Bio Organics Limited (Unit: Meerganj, Division: Sugar) office staff to estimate individual water consumption on sanitary and drinking purposes based on questionnaire format.
- Flow rate calculation from the taps flow rates and number of all water using fixtures/ equipment was also undertaken.
- Flow rate calculation and running hours of bore wells to calculate the total ground water consumption.
- Secondary data collection included compilation of number of staff along with their duration of stay.



- Collecting records of water pumped to the overhead and underground tanks and average running hours of all pumps etc. to estimate actual supply.

3.4 Conducting a Water Audit at the plant level

- The data collection including raw water, utilities, domestic water etc was done on the basis of actual consumption.
- The data for all the above uses was calculated for varying time period for M/s Dhampur Bio Organics Limited (Unit: Meerganj, Division: Sugar) to calculate per capita use.

CHAPTER 4
ASSESSMENT OF WATER USAGES

4.0 Assessment of Present Water Usage

4.1 Plant Water Consumption Trends (Last 3 Years)

M/s Dhampur Bio Organics Limited (Unit: Meerganj, Division: Sugar) has only one source of water to the plant i:e ground water through four (04) no. of Bore wells which are being operating continuously to meet the demand of the plant. Each source and bore well is fitted with individual meter.

The Ground water after extraction is Groundwater after extraction is supplied to various areas such as WTP for treatment, Softener plant for process, utility, and domestic consumption such as hand wash, toilets, and canteen. The water consumption pattern for last four (04) years at all the consumption areas is shown below:

Table 1, Water Consumption Trend (January-2021 to December-2021)

Months	Total Water Withdrawal from Bore well-1 (KL)	Total Water Withdrawal from Bore well-2 (KL)	Total Water Withdrawal from Bore well-3 (KL)	Total Water Withdrawal from Bore well-4 (KL)	Total Bore well Water Consumed in Process (KL)	Total Borewell WaterConsumed in (Co-Gen) (KL)	Total Bore well Water Consumed in Domestic (KL)
Jan	2225	7513	577	739	2114	7212	1277
Feb	1666	8681	178	575	1583	8334	730
Mar	997	9641	205	651	947	9255	830
April	657	6066	129	704	624	5823	808
May	1020	1080	180	618	969	1037	774
Jun	2251	293	155	638	2138	281	769
July	396	0	162	660	376	0	797
Aug	120	0	112	518	114	0	611
Sep	682	0	122	553	648	0	655
Oct	1365	0	139	568	1297	0	686
Nov	2659	6954	146	592	2526	6676	716
Dec	284	6419	167	601	270	6162	745
Total	**14322**	**46647**	**2272**	**7417**	**13606**	**44781**	**9398**

Table 2, Water Consumption Trend (January-2022 to December-2022)

Months	Total Water Withdrawal from Bore well-1 (KL)	Total Water Withdrawal from Bore well-2 (KL)	Total Water Withdrawal from Bore well-3 (KL)	Total Water Withdrawal from Bore well-4 (KL)	Total Bore well Water Consumed in Process (KL)	Total Bore well Water Consumed in (Co-Gen) (KL)	Total Bore well Water Consumed in Domestic (KL)
Jan	1155	6176	152	624	1097	5929	753
Feb	1113	7688	156	606	1057	7380	739
Mar	2081	7030	174	613	1977	6749	763
April	3833	4914	193	603	3641	4717	772
May	2560	443	154	618	2432	425	749
Jun	0	0	151	626	0	0	754

July	0	0	150	636	0	0	762
Aug	656	0	169	618	623	0	763
Sep	0	254	175	606	0	244	758
Oct	5083	326	149	615	4829	313	741
Nov	3855	5406	182	618	3662	5190	776
Dec	0	6498	201	646	0	6238	822
Total	**20336**	**38735**	**2006**	**7429**	**19319**	**37186**	**9152**

Table 3, Water Consumption Trend (January-2023 to December-2023)

Months	Total Water Withdrawa lfrom Bore well-1 (KL)	Total Water Withdrawal from Bore well-2 (KL)	Total Water Withdrawal from Bore well-3 (KL)	Total Water Withdrawal from Bore well-4 (KL)	Total Bore well Water Consumed in Process (KL)	Total Bore well Water Consumed in (Co-Gen) (KL)	Total Bore well Water Consumed in Domestic (KL)
Jan	0	7791	208	655	0	7479	837
Feb	0	8052	189	591	0	7730	757
Mar	286	8613	194	663	272	8268	831
April	4133	4114	170	622	3926	3949	768
May	3980	41	162	642	3781	39	780
Jun	0	0	159	620	0	0	756
July	0	0	168	649	0	0	792
Aug	0	0	171	643	0	0	790
Sep	209	0	175	624	199	0	775
Oct	1480	552	192	621	1406	530	789
Nov	5328	8097	215	610	5062	7773	800
Dec	33	8283	252	664	31	7952	889
Total	**15449**	**45543**	**2255**	**7604**	**14677**	**43721**	**9563**

OBSERVATION

394 KL/day from (Jan-2023 to December-2023), considering 180 days of bore well water is being obtained from existing Bore wells for drinking/domestic and industrial purpose. From the above table it can be seen, that the major water requirement is from November to May months and from June to October the ground water is used only for domestic purposes.

4.2 Water Sources, Which Should Include Rain Water, Ground Water & Other Sources

The main source of drinking and other water usage at M/s Dhampur Bio Organics Limited (Unit: Meerganj, Division: Sugar) is water received from ground through four (04) bore-well (submersible pump) located in the plant area. The details of bore well pumps and their locations are mentioned below.

Table 4 Rated Details and Location of Bore well Pumps

Sr. No.	Type of Structure	Year of Construction	Bore well Depth (meter)	Location	HP of Pump	Rated Flow (m3/hr)	Max. Running Hrs.
1	Submersible	01-04-1995	60	Near Process	50	155	2
2	Submersible	01-04-1995	60	Near Boiler	50	155	2
3	Submersible	01-04-1995	60	Colony	10	50	2
4	Submersible	01-04-2012	60	Near Main Gate	2	5	2

4.3. Water Supply & Distribution Details

A water network diagram provides a schematic (simplified) representation of facility's water distribution system from the source or point of entry (to the facility) to points of water consumption. In Dhampur Bio Organics Limited (Unit: Meerganj, Division: Sugar) there is four (04) source of water i:e ground water from four (04) bore wells.

Effluent Treatment Plant: To treat the sugar factory effluents, plant has installed an ETP having design capacity of 2200 KLD. The sugar unit ETP treated water is being gainfully utilized in the irrigation of factory own green belt and farmers land/field through close pipeline network in accordance with the irrigation plan submitted to UPPCB.

4.4 Water Balance

The assessment team has reviewed the water supply and consumption as well as the losses in the water distribution network in the plant. The water balance diagram of the system is given in below table and figure:

Table 5
Water Balance of M/s Dhampur Bio Organics Limited (Unit: Meerganj, Division: Sugar) (Jan - 2023 to Dec - 2023)

Sr. No.	Particulars	KL/Year
	Bore well Water available in Plant	
1	Total Water Extracted from Bore well # 1	15449
2	Total Water Extracted from Bore well # 2	45543
3	Total Water Extracted from Bore well # 3	2255
4	Total Water Extracted from Bore well # 4	7604
5	Total Water Available for Plant	70851
	Total Ground Consumed in Plant	
6	Total Bore well Water Consumed in Co-gen (Utility) (KL)	43721
7	Total Bore well Water Consumed in Process (Chemical Preparation (KL)	14677
8	Total Bore well Water Consumed in Domestic (KL)	9563
9	Total Water Consumed in Plant =((43721+14677+9563)= 67961))	67961
10	Total Leakage/Unaccounted Loss in Bore well Water = (70851-67961= 2890)	2890
	ETP	
11	Total ETP Inlet Water	167206
12	Total ETP Outlet Water	163243

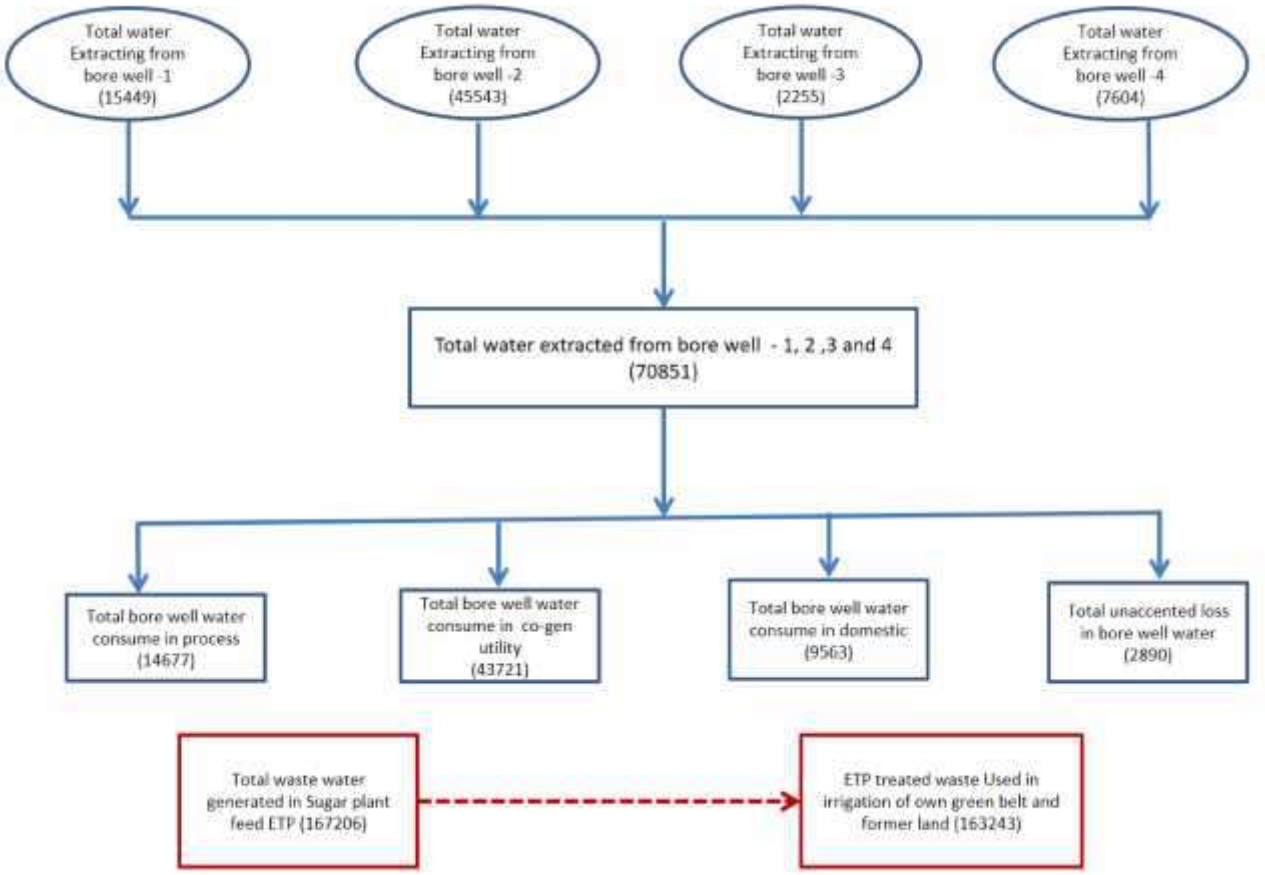


Figure 2 Water Balance Diagram of DBOL, (Unit: Meerganj, Division: Sugar)

It is evident from the above water balance diagram is that the total water available at M/s Dhampur Bio Organics Limited (Unit: Meerganj, Division: Sugar) is 70851 KL/year i:e 394 KL/day (Jan - 2023 to Dec-2023, considering @ 180 days). The water consuming areas are co-gen(utility) which accounts for 61.71% (43721 KL/year), domestic which accounts for 13.5% (9563 KL/year), process (chemical preparation) which accounts for 20.72% (14677 KL/year) and leakages/unaccounted loss is 4.08 % (2890 KL/year).

From Figure 2, it is seen that the total ground water abstraction from Jan-2023 to Dec-2023 is 70851 KL/year i:e 394 KL/day, this shows that Dhampur Bio Organics Limited (Unit: Meerganj, Division: Sugar) comply with the NOC for ground water withdrawal of 730 KL/day.

4.5 Water Metering & Monitoring System

Monitoring is the most important prerequisite for efficient water management. Thus, in the water supply network, it is necessary to have a robust system of monitoring. During the audit, the available flow meters were identified, and their working conditions were checked.

4.6 Measurement at different locations through Ultrasonic Flow meter

Dr Yogendra Kumar Verma team measures the flow for all the flow meters installed in the plant with the help of ultrasonic flow meter to check any variation in flow meter reading. All flow meters were giving accurate results. Data captured with Ultrasonic Flow meter and Meter installed at the plant is shown in below table:

Table 6 Measurement at Different Location through Ultrasonic Flow Meter

Sr. No	Location of Flow Meter	Auditor flow meter reading	PlantFlow Meter reading	% Error	Type
1	Bore well No. 1 Reading	147	148	0.68%	Digital
2	Bore well No. 2 Reading	145.5	147	1.03%	Digital
3	Bore well No.-3 Reading	46.5	46	1.07%	Digital
4	Bore well No.-4 Reading	4.08	4	1.96%	Digital
5	ETP Inlet Flow Meter Reading	45.5	46	1.09%	Digital
6	ETP Outlet Flow Meter Reading	43.7	43	1.60%	Digital

OBSERVATION

- From the above table it is seen that the % error is 1.24 %. The accuracy of flow meter may vary ± 2 %. Therefore, this variation is within the permissible limit.

4.7 Area Wise Water Consumption in Plant

The break up for water consumption in different area is provided in below tables and bar charts

Table 7 Area Wise Water Consumption in the Plant Jan-2023 to Dec-2023

Area of Water Consumption	Quantity (KL/year)	Percentage (%)
Total Bore well Water Consumed in Co-gen (Utility) (KL)	43721	62%
Total Bore well Water Consumed in Process(Chemical Preparation) (KL)	14677	21%
Total Bore well Water Consumed in Domestic (KL)	9563	13%
Total Leakage/unaccounted Loss in Bore well Water(KL)	2890	4%

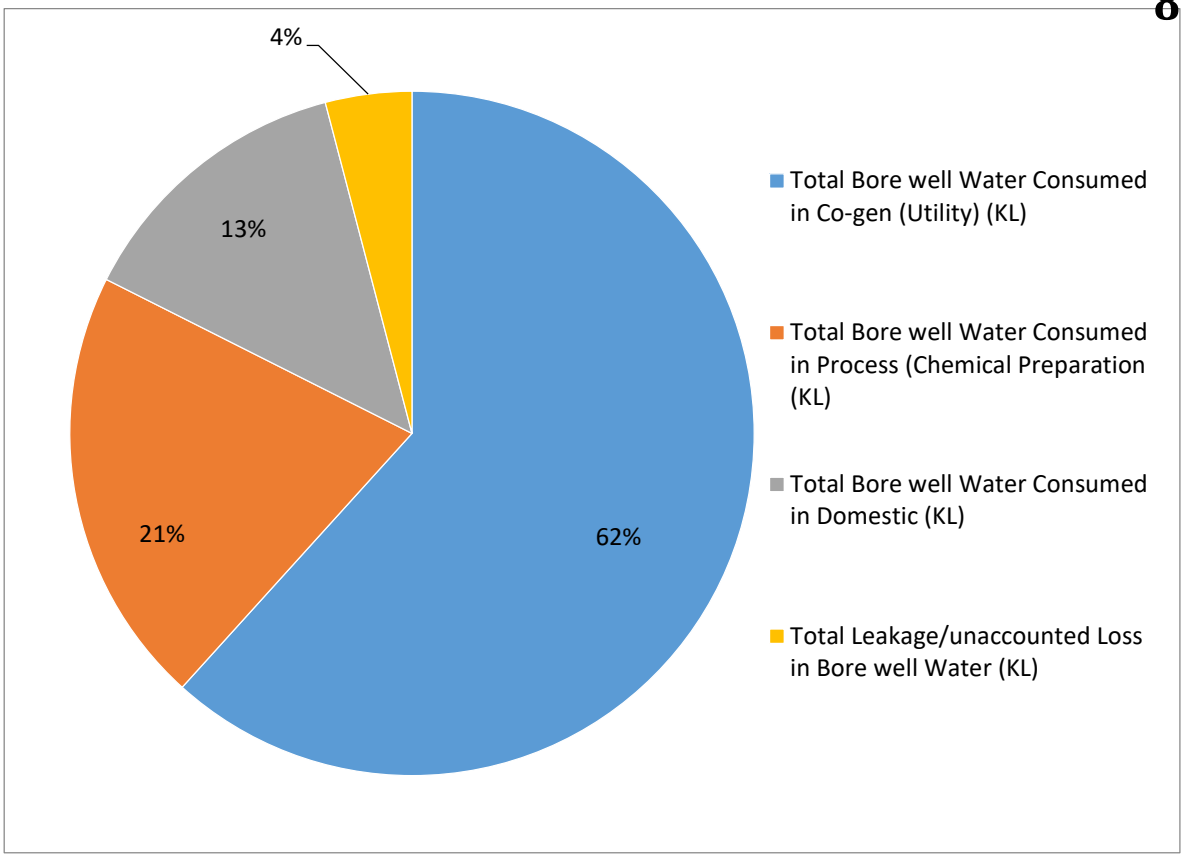


Figure 3; Area wise Water Consumption in the Sugar Plant

4.8 Total Raw Water Withdrawal for Last Three Years

Total Raw Water Withdrawal for last three (3) years is shown in below table

Table 8 Total Raw Water Withdrawal for Jan-2021 to Dec-2023

Year	Month	Total Water Withdrawal from Bore well-1 (KL)	Total Water Withdrawalfrom Bore well-2 (KL)	Total Water Withdrawal from Bore well-3 (KL)	Total Water Withdrawal from Bore well-4 (KL)
2021	January	2225	7513	577	739
	February	1666	8681	178	575
	March	997	9641	205	651
	April	657	6066	129	704
	May	1020	1080	180	618
	June	2251	293	155	638
	July	396	0	162	660
	August	120	0	112	518
	September	682	0	122	553
	October	1365	0	139	568
	November	2659	6954	146	592
	December	284	6419	167	601
Total		**14322**	**46647**	**2272**	**7417**
2022	January	1155	6176	152	624
	February	1113	7688	156	606
	March	2081	7030	174	613
	April	3833	4914	193	603
	May	2560	443	154	618
	june	0	0	151	626

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	July	0	0	150	636
	August	656	0	169	618
	September	0	254	175	606
	October	5083	326	149	615
	November	3855	5406	182	618
	December	0	6498	201	646
Total		**20336**	**38735**	**2006**	**7429**
2023	January	0	7791	208	655
	February	0	8052	189	591
	March	286	8613	194	663
	April	4133	4114	170	622
	May	3980	41	162	642
	June	0	0	159	620
	July	0	0	168	649
	August	0	0	171	643
	September	209	0	175	624
	October	1480	552	192	621
	November	5328	8097	215	610
	December	33	8283	252	664
Total		**15449**	**45543**	**2255**	**7604**

Table 9, Break-Up of Sources Withdrawal Pattern

Source	Total Raw water Withdrawal from Jan-2023 to Dec-2023, KL/year	Percentage (%)
Bore well no.1	15449	22
Bore well no.2	45543	64
Bore well no.3	2255	3
Bore well no.4	7604	11
Total	**70851**	**100**

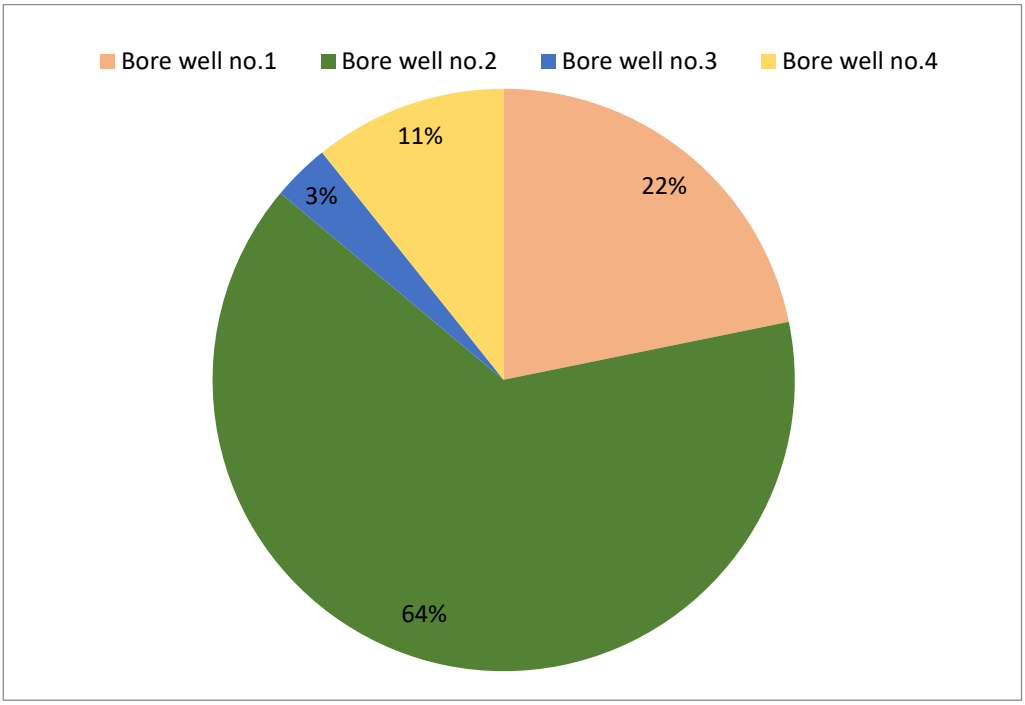

Figure 4, Bore well Water Withdrawal from Jan-2023 to Dec-2023

4.9 WATER COSTING:

Rates of ground water abstraction charges for other industries and infrastructure projects in safe, semi- critical and critical assessment units is given in table below. Since DBOL, Meerganj is in safe zone and NOC limit for water abstraction is 730 m^3/day, which is under range of 500 to <1000 m^3/day, therefore the cost of groundwater abstraction is Rs 0.80/m^3 as per Table 17.

Table 10 : Rs. / KL the cost of groundwater abstraction

S.No.	Categoryof area / Ground waterUse	Quantum of ground water withdrawal			
		< 500 (m^3/day)	500 to <1000 (m^3/day)	1000 to <5000 (m^3/day)	5000 (m^3/day) and above
1.	Safe	0.70	0.80	0.90	1.0
2.	Semi-critical	0.80	0.90	1.0	1.10
3.	Critical	0.90	1.0	1.10	1.20
4.	Over exploited	1.0	1.1	1.20	1.30

The Audit team calculated the per KL cost of Raw water. The Rs. /KL cost of Raw water is calculate to sum of expense towards energy and maintenance cost at bore well and cost of bore well water abstraction charge. The detail of Raw Water Rs. /KL cost is provided in below table.

Table 11: Rs. / KL cost of Raw Water withdrawal

Sr. No	Particulars	Value/ year
1	Total Energy Cost of Borewell-1,2,3 and 4 Rs.	81527.8
2	Total Maintenance Cost of Borewell-1,2,3 and 4 Rs.	39600
3	Total Cost for bore well water including Energy Charges, Man Power Cost and Maintenance Cost, Rs.	121127.8
4	Total Water Extraction from all Bore wells (Jan-2023 to Dec-2023) in KL	70851
5	Cost of Water	1.709613

The total bore well water extraction cost =total energy and maintenance cost + Rs. / KL the cost of groundwater abstraction =2.5 Rs. / KL

4.10 Calibration Certificates:

M/s Dhampur Bio Organics Limited (Unit : Meerganj, Division : Sugar) has done calibration of the Bore Well and ETP Inlet and Outlet flow meters installed in the plant. Calibration certificates are attached as Annexure-A. (Please attach all the calibration certificates)

4.11 Cooling Tower Performance

During study, measurements of Cooling Tower, temperature/relative humidity of supply air, inlet/outlet temperature of water and power consumption of fans has been carried out. Cooling Tower performance calculations are summarized as below.

Table: 12 Performance Evaluation of Cooling Towers

Measured Parameters			
1.	Hot Cooling Water Inlet to Tower from the Plant	°C	72
2.	Cold Cooling Water Outlet from Tower to the Plant	°C	32
3.	Air Inlet (DBT)	°C	29
4.	(WBT)	°C	19.5
5.	Operating Range	°C	10.0
6.	Approach	°C	7.5
7.	Effectiveness Of Cooling Tower	%	61
8.	Remarks	-	

- From the above table it can be seen, that the Process cooling Tower is giving satisfactory results. The CT effectiveness is dependent on the ambient conditions, but despite that, the effectiveness should normally in the range of 60 % & above. The evaluated CT effectiveness was in the range from 61 % to 65 %.

RECOMMENDATIONS:

- The Process cooling Tower is giving satisfactory results. The CT effectiveness is dependent on the ambient conditions, but despite that, the effectiveness should normally in the range of 60% & above. The evaluated CT effectiveness was in the range from 61 % to 65 %.
- The audit team took the flow and pressure readings from their own instruments and found that the pressure gauge reading of Bore Well # 2 was having error. Here we recommend replacing the pressure gauge at the discharge line of Bore Well # 2.
- During measurements, it was observed that BW # 2 is consuming 45kW against the rated power of 42kW. Here we recommend checking the pump to avoid any overheating or pump malfunctioning.

CHAPTER 5
WATER TREATMENT PRACTICES

5.0 Introduction

The Water Treatment Practices in M/s Dhampur Bio Organics Limited (Unit: Meerganj, Division: Sugar) at village: Nagaria Sadat, Block & Tehsil: Meerganj, District: Bareilly (Uttar Pradesh) - 243504 includes DM PLANT having design Capacity 20 m^3/hr. To treat the sugar effluent, plant has installed one ETP having design capacity of 2200 m^3/hr. To treated Domestic effluent, plant has installed one (01) Sewage Treatment plant of capacity: 50 KLD.

5.1 Raw / Fresh Water Treatment

For fresh water treatment, M/s Dhampur Bio Organics Limited (Unit: Meerganj, Division: Sugar) has installed DM Plant of Capacity 20 m3/hr .During the Jan-2023 to December-2023, approximately 235 (m^3/day) of treated effluent And Bore well Water, purified through UF, UV, and RO plants, is being utilized in the DM plant. The water undergoes a sequence of treatment stages: it is pumped from the raw water storage tank to the MGF plant, then to a cation exchanger, followed by a degasser, anion exchanger, and finally, a mixed bed exchanger to remove remaining Total Dissolved Solids (TDS). The resulting demineralized (DM) water is stored in dedicated tanks and subsequently used for boiler makeup.

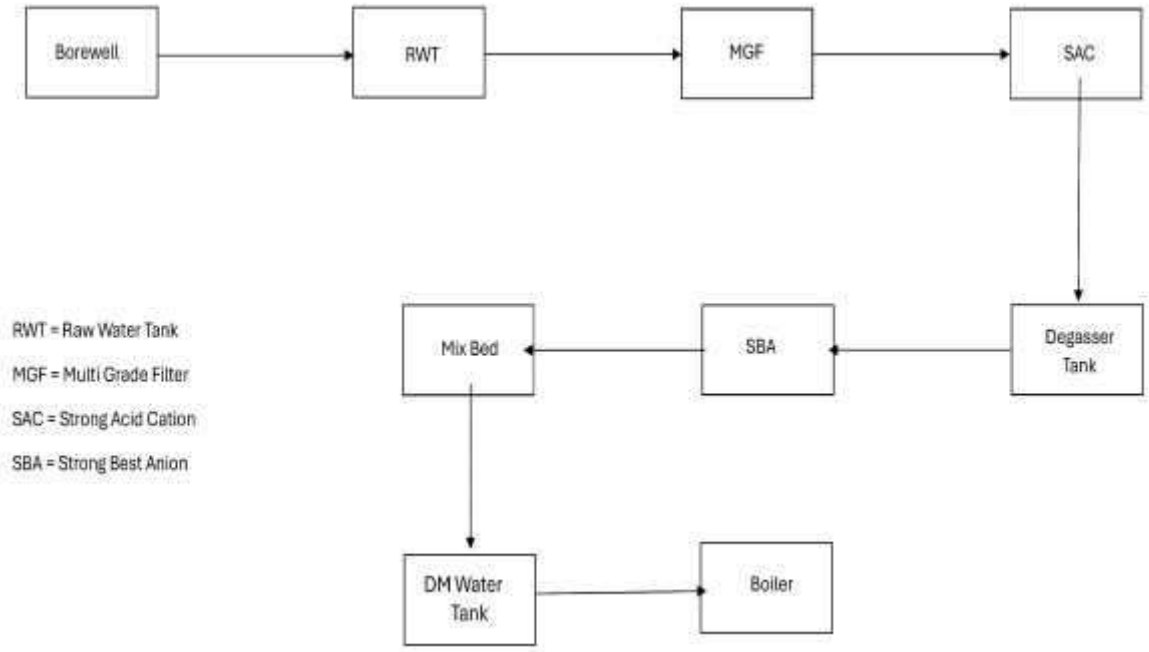

Figure 5; DM Plant Flow Chart

Unit Description

MGF (Multi Grade Filter)

An MGF is used in water and wastewater treatment to remove suspended solids, dust, and dirt present in the water. The MGF is a depth filter that makes use of coarse and fine media to create pore dimensions that retain large and small suspended particles. Function of the filter is to act

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as a tertiary treatment unit to trap the trace amounts of solids which escape the clarifier, and can typically handle up to 50 mg/l of solids in an economical manner. This unit is essentially filled with graded media (sand and gravel). The water filtered with filter is passed on to the next DM stage in the chain: The Iron Removal Filter.

Degassers

Degassers are economically beneficial to many demineralization systems, because they reduce the amount of caustic required for regeneration. Water from a cation exchanger is broken into small droplets by sprays and trays or packing in a degasser. The water then flows through a stream of air flowing in the opposite direction. Carbonic acid present in the cation effluent dissociates into carbon dioxide and water. The carbon dioxide is stripped from the water by the air, reducing the load to the anion exchangers. Typical forced draft degassers are capable of removing carbon dioxide down to 10-15 ppm. However, water effluent from a degasser is saturated with oxygen.

Strong Acid Cation Exchanger

Strong acid cation exchanger is a vessel in which an ion exchange process takes place. The cations (calcium, magnesium and sodium chloride, sulphates, carbonate, and bicarbonate salts) present in the water get converted into their equivalent acid in this unit. Strong acid cation resin will replace all the cations in raw water with hydrogen ions, thus reducing the dissolved solids in raw water. When the cation exchanger gets exhausted, it is regenerated with acid to restore hydrogen ions. It is suitable for both manual and automatic operation. They are available as both co-flow and counter current regeneration units.

Strong Base Anion Exchanger

Strong base anion unit is a vessel in which an ion exchange process takes place. OH^- ions replace the anions present in TDS to produce demineralized water. The anions present in the water i.e. Cl, SO4, HCO3 and silica etc. are exchanged with OH^- ions available in the resin and water is demineralized. Therefore, water becomes demineralized resulting in a solution of pure water. When the anion exchanger gets exhausted, it is regenerated with caustic solution to replenish OH^- ions. They can be operated manually or automatically. They are available as co-flow and counter current regeneration units.

Mixed Bed Exchangers

A mixed bed exchanger has both cation and anion resin mixed together in a single vessel. As water flows through the resin bed, the ion exchange process is repeated many times, "polishing"

the water to a very high purity. During regeneration, the resin is separated into distinct cation and anion fractions. The resin is separated by backwashing, with the lighter anion resin settling on top of the cation resin. Regenerate acid is introduced through the bottom distributor, and caustic is introduced through distributors above the resin bed. The regenerate streams meet at the boundary between the cation and anion resin and discharge through a collector located at the resin interface. Following regenerate introduction and displacement rinse, air and water are used to mix the resins. Then the resins are rinsed, and the unit is ready for service.

Counter flow and mixed bed systems produce a purer water than conventional cation-anion demineralizers, but require more sophisticated equipment and have a higher initial cost. The more complicated regeneration sequences require closer operator attention than standard systems. This is especially true for a mixed bed unit.

Figure: 6 DM PLANT

5.1.1 DM Plant Treated Water Cost

The Audit team calculated the Rs. /KL cost of DM Water. The Rs. /KL cost of DM water for the year 2023 is Rs **55.23/KL**. The expenses towards energy consumption at RO and PSF, chemical costs and manpower cost are considered for calculating the total cost for treatment. The details are provided in below table:

Table 13 Rs. /KL Cost of DM Water

Particulars	Value (per Day)
Total Man Power Cost of DM water, Rs.	4500
Total Chemical and Maintenance Cost of DM water, Rs.	5580
Total Energy Charge of DM water, Rs.	2900
Total Monthly Cost for treatment including Energy Charges, Maintenance, Man Power and Chemical Cost, Rs.	12980

Total Water Treated from DM water, KL	235
Cost of DM water	55.23

NOTE: Audit team calculated the combined cost of DM water

5.2 Waste Water Treatment & Disposal

5.2.1 STP (Sewage Treatment Plant)

Plant treats Domestic Sewage in well-designed existing sewage treatment plant (Total Capacity 50 KLD). In STP the major input from is from colony Domestic sewage. As per data observation, approx. 40 KLD water is treated in the facility. The Description installed STP is given below.

Unit Description

Settling Chamber

A sedimentation tank in wastewater treatment removes particles from the water. The accumulated solids, or sludge, form at the bottom of the sedimentation tank and are removed periodically. Coagulants are typically added to the water before sedimentation to aid in the settling process. Sedimentation is a physical water treatment process using gravity to remove suspended solids from water. Solid particles entrained by the turbulence of moving water may be removed naturally by sedimentation in the still water of lakes and oceans.

Oil And Grease Trap

The oil and grease trap is placed at the discharge point of the settling tank itself to arrest solid and fatty matter at source or it is placed after screen chamber so as prevent the fatty matter to enter Equalisation chamber. The wastewater output from this unit is taken to the equalization tank. The solids and fats that are separated in this unit are disposed-off along with other biodegradable waste, and can be used as feed for piggeries. The use of skimmers in industrial applications is often required to remove oils, grease, and fats prior to further treatment for environmental discharge compliance. By removing the top layer of oils, water stagnation, smell and unsightly surface scum can be reduced. Placed before an oil water treatment system an oil skimmer may give greater overall oil separation efficiency for improved discharge wastewater quality. It should be noted that all oil skimmers will pick up a percentage of water with the oil which will need to be decanted to obtain concentrated oil. Separating grease from the wastewater at source ensures that the contact time between solids and wastewater is kept to a minimum, so that the wastewater does not absorb additional organic pollutant loads (starch, carbohydrates, proteins) due to leaching of these substances from the solids. (Rather than building a larger STP to digest this extra organic matter, it is far more economical to prevent the organic matter from entering the STP.)

Equalization Tank

The sewage from the bar screen chamber and oil, grease and grit trap then enters in the equalization tank. The equalization tank is the first collection tank in an STP. Its main function is to act as buffer: To collect the incoming raw sewage that comes at widely. Equalization tank is used only for buffering the daily fluctuations in the sewage flow quantity. The equalization tank must be of sufficient capacity to hold the peak time inflow volumes. Equalization tank with a capacity to hold 4-6 hours of average hourly flow should be adequate.

Aeration Tank

The biological treatment of the wastewater takes place in the aeration tank. Before the wastewater gets to this tank, it is mixed with activated sludge. This contains countless microorganisms, such as bacteria, that are able to break down the colloidal, organic contaminants dissolved in the wastewater. Aeration brings water and air in close contact in order to remove dissolved gases (such as carbon dioxide) and oxidizes dissolved metals such as iron, hydrogen sulphide, and volatile organic chemicals (VOCs). Aeration is often the first major process at the treatment plant. During aeration, constituents are removed or modified before they can interfere with the treatment processes. The oxidized sewage overflows into the secondary settling tank.

Tube Settler

Tube settlers utilize multiple adjacent tubular channels that are sloped at a nominal 60° angle and combine to form an increased effective settling area. The size and shape of the tubular channels vary by manufacturer. Brentwood's tube settler design features a trapezoidal shape created by thermoforming PVC sheets. It is incorporated after the biological process to settle down the solids form after aeration. Polyelectrolyte is used sometimes to achieve maximum solid settling after aeration process. To produce clear supernatant water, in the overflow from the clarifier feed to clear water tank. All the above actions occur due to gravity. The thick biomass is re-circulated back to the aeration tank & if there is excess sludge then it is sent to belt press for sludge dewatering.

Chlorine Contact Tank

Chlorine contact tanks are commonly used to disinfect drinking water prior to distribution. These tanks are usually open chambers split by a series of baffles. Sub-dividing the chambers helps to control the flow of water through the tanks and improves the chlorine disinfection process.

Filter Feed Pumps

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Function Filter feed pumps are used to take the water from the clarified water sump and pass it through the pressure sand filter and activated carbon filter installed in series.

Pressurised Sand Filter

Function of the pressurised sand filter is used as a tertiary treatment unit to trap the trace amounts of solids which escape the clarifier, and can typically handle up to 50 mg/l of solids in an economical manner. This unit is essentially filled with graded media (sand and gravel). The water filtered with sand filter is passed on to the next stage in the STP chain: The Activated Carbon Filter.

Activated Carbon Filter

An activated carbon filter, like the Pressure Sand Filter, is a tertiary treatment unit. It receives the water that is already filtered by the Pressure Sand Filter and improves multiple quality parameters of the water: BOD, COD, clarity (turbidity), colour and odour.

Figure; 07 STP (50 KLD)

5.5.2 ETP (2200 KLD)

The crushing capacity of M/s Dhampur Bio Organics Limited (Unit: Meerganj, Division: Sugar) is 9000 TCD and the ETP capacity is 2200 KLD. A brief description of the plant & process developed by M/s Dhampur Bio Organics Limited (Unit: Meerganj, Division: Sugar) for the treatment of sugar factory effluents is given below. The process is highly scientific, efficient & simple to operate & there is no danger of seepage. The working of the Plant is easy

& needs only a little supervision. The waste water collected from various sections in the process is collected in a combined effluent drain leading to the E.T.P. The treatment process is divided into three steps.

Primary Treatment: It is mainly physical and chemical treatment. A coarse screen is fixed in the drain just before the E.T.P. for the removal of coarse material / particles such as paper, cloth etc. The effluent passes through a fixed type mechanical oil skimmer for removing of oil and grease from the surface of effluents. The oil & grease collected is scrapped from the surface & is stored in a PVC drum. The same is mixed with bagasse and burnt in boiler.

The effluent now enters into a reaction / flash mixing tank; here the effluent is mixed thoroughly with the requisite doses of lime and polyelectrolyte's by with stirring. The pH of the resulting effluent should be 7.5 to 8.0 at this stage. The effluent now enters into Equalization tank to homogenize the wastewater. The Equalization tank provides the necessary residence time for mixing of varying Effluents so as to attain the average value for the various parameters.

Figure 6, Equalization tank of DBOL (Unit: Meerganj, Division: Sugar)

The mixed effluent is then fed into a primary clarifier at a definite rate with the help of acentrifugal pump. The mixed effluent is then fed into a claro-flocculation unit fitted with a central flocculation chamber cum feed channel and the annular settling chamber. This is fitted with the low speed paddle mixer for flock formation. He flocculated solid mass settles on the bottom floor, from where it is continuously swept into bottom sludge well by mechanical scrapper for eventual removal into sludge drying bed under hydrostatic head.

The addition of lime and polyelectrolyte helps in coagulating most of the colloidal solid as well as all suspended solids and their eventual removal. The settled sludge at the bottom of the clarifier is collected in sludge well by means of rotating mechanical system. From here the sludge is removed by a sludge pump and sent to sludge drying bed.

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Figure : 9 Primary Clarifier of DBOL (Unit: Meerganj, Division: Sugar)

Secondary Treatment:

The activated sludge process is the most common option in secondary treatment. Aeration in an activated sludge process is based on pumping air into a tank, which promotes the microbial growth in the wastewater. The microbes feed on the organic material, forming flocks which can easily settle out. After settling in a separate settling tank, bacteria forming the "activated sludge" flocks are continually recalculated back to the aeration basin to increase the rate of decomposition.

Aeration provides oxygen to bacteria for treating and stabilizing the wastewater. Oxygen is needed by the bacteria to allow biodegradation to occur. The supplied oxygen is utilized by bacteria in the wastewater to break down the organic matter containing carbon to form carbon dioxide and water. Without the presence of sufficient oxygen, bacteria are not able to biodegrade the incoming organic matter in a reasonable time. In the absence of dissolved oxygen, degradation must occur under septic conditions, which are slow, odorous, and yield incomplete conversions of pollutants. Under septic conditions, some of the biological process converts hydrogen and sulphur to form hydrogen sulphide and transform carbon into methane. Other carbon will be converted to organic acids that create low pH conditions in the basin and make the water more difficult to treat and promote odour formation and blackish colour of water. Biodegradation of organic matter in the absence of oxygen is a very slow biological process.

It is the biological treatment of the effluent. The residual B.O.D. of the primary intensive oxidation of all organics by means of a high sludge concentration. The relatively higher sludge mass in the system also allow for considerable colour removal of the colour by adsorption as well as metabolism by the microorganism. The sustenance of high biological activity of the

sludge requires sufficient nutrients within the effluent i.e. N & P in particular which help in the growth of new cells. The effluent as such contains very little N. The requirement of N & P is related to the B.O.D. content. A typical value of B.O.D.: N & P as 100:5:1 is required to be maintained.

This requires addition of nutrients in the form of Urea & DAP (Di-ammonium phosphate). These nutrients are added continuously by gravity feeding from two mixing tanks for each nutrient separately.

Figure 10: Aeration tank of DBOL (Unit: Meerganj, Division: Sugar)

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Secondary Clarifier:

The combination of primary treatment and secondary activated sludge process with sludge concentration (MLSS) removes most of the colour components resulting in a relatively clear effluent. The activated sludge process is based on the recycle sludge mass from the secondary settler. Sludge is recycling into the aeration chamber to maintain high sludge concentration. The excess sludge produced during the bio-oxidation process is discharged in sludge drying bed for dewatering. A high sludge concentration (MLSS) of 2500-3000mg/ltr is maintained within the system. The aeration chamber is designed as a completely mixed system. The mixing and oxygen supply for the oxidation load is provided by means of the mechanical aerators of fixed type.

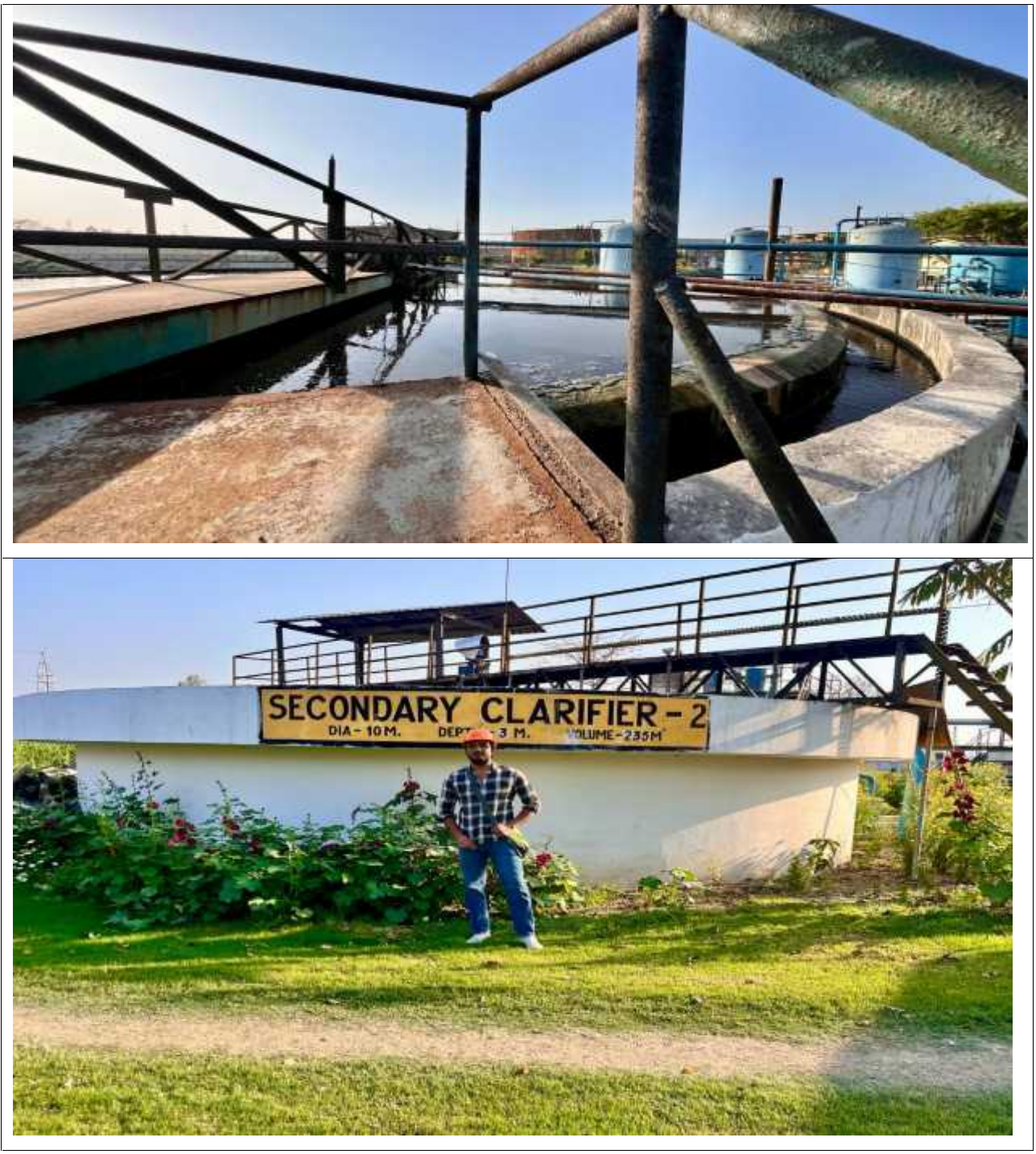

Figure 11, Secondary Clarifier of DBOL(Unit: Meerganj, Division: Sugar)

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Tertiary treatment: The mixed effluent from the aeration chamber flows into a secondary clarifier for separation of the sludge. The supernatant liquid passed through activated carbon filter for polishing of the treated effluent. The effluent from collection tank is pumped into coarse sand filter & activated carbon filter respectively. Both units are in series and they not only reduce suspended solids to a great extent but also help in removing of B.O.D. to some extent.

Figure 12, Tertiary treatment of DBOL (Unit: Meerganj, Division: Sugar)

Standards of treated water:

The MoEF & CC has issued a detailed notification for the sugar industry treated effluent parameters standards norms on dated 14th January 2016. The details of treated water effluent norms are as given in table.

Table 14 Table Standard Tolerance Limit

S. No.	Parameters	Standards Limits
1.	pH	5.5 to 8.5
2.	Suspended Solids	100 mg/lit for land application, 30 mg/ltr for water body.
3.	B.O.D.	100 mg/lit for land application, 30 mg/ltrfor Water body.
4.	Total dissolved Solids	2100 mg/ltr.
5.	Oil & Greece	10 mg/ltr.
6.	C.O.D.	250 mg/ltr.

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5.3 Online Continuous monitoring system: M/s Dhampur Bio Organics Limited (Unit: Meerganj, Division: Sugar) also installed Online Continuous monitoring system for sending the real time data to the server of CPCB and UPPCB.

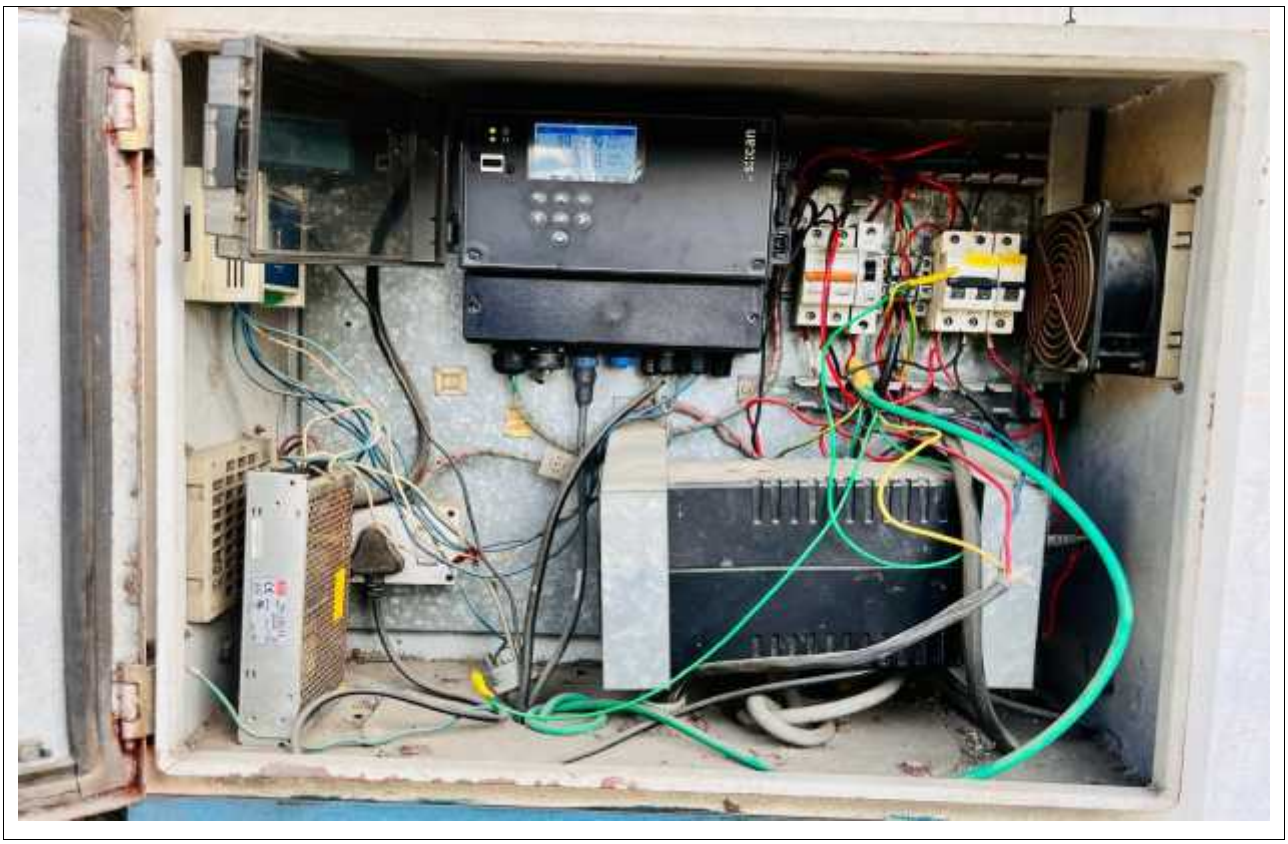

Figure 11, Online monitoring System

Disposal of treated effluent: The sugar unit ETP treated water is being gainfully utilized in the irrigation of factory own green belt and farmers land/field through close pipeline network in accordance with the irrigation protocol submitted to UPPCB.

Figure-14 : 2200 KLD ETP (ETP LABORATORY)

The Audit team calculated the Rs. /KL cost of ETP Water. The Rs. /KL cost of ETP water for the year 2023 is 30.0 Rs /KL. The expenses towards energy consumption at ETP plant, chemical costs and manpower cost are considered for calculating the total cost for treatment. The details are provided in below table:

Table 15, Rs. /KL cost of ETP Treated Water

Sr. No.	Particulars	Value/Month
1	Total Manpower Cost of ETP, Rs.	156350
2	Total Chemical Cost of ETP, Rs.	395500
3	Total Maintenance Cost of ETP, Rs.	50000
4	Total Energy Charge of ETP, Rs.	133380
5	Total Cost for treatment including Energy Charges, Chemical, Maintenance Cost and Man Power Cost, Rs.	735230
6	Total Water Treated, KL	24487
7	Cost of ETP Rs./KL	30.0
8	Cost of ETP Rs./L	0.03

The Audit team has collected and reviewed the quantity of treated wastewater at ETP for year 2021, 2022 and 2023. The detail of treated waste water supply is provided in below tables:

Table 16,
ETP Inlet/Outlet Water Crushing Season Jan- 2020 to Dec-2021

Months	KLD Plant ETP Inlet Water (KL)	KLD Plant ETP outlet
Jan-21	22449	22040
Feb-21	17976	18331
Mar-21	19867	19852
Apr-21	13151	15230
May-21	1962	1940
Jun-21	0	0
Jul-21	0	0
Aug-21	0	0
Sep-21	0	0
Oct-21	0	0
Nov-21	15476	14891
Dec-21	26751	26719
Total	**117632**	**119003**

Table 16,
ETP Inlet/Outlet Water Crushing Season Jan- 2021 to Dec-2022

Months	KLD Plant ETP Inlet Water (KL)	KLD Plant ETP outlet
Jan-22	26194	26201
Feb-22	23808	23757
Mar-22	29310	29282
Apr-22	29622	29654
May-22	4006	3889
Jun-22	0	0
Jul-22	0	0
Aug-22	0	0
Sep-22	0	0
Oct-22	0	0
Nov-22	22480	18517
Dec-22	29562	28933
Total	**164982**	**160233**

Table 17,
ETP Inlet/Outlet Water Crushing Season Jan- 2022 to Dec-2023

Months	KLD Plant ETP Inlet Water (KL)	KLD Plant ETP outlet
Jan-23	30296	29430
Feb-23	27163	26741
Mar-23	28660	28289
Apr-23	11597	11330
May-23	2099	3682
Jun-23	0	0
Jul-23	0	0
Aug-23	0	0
Sep-23	0	0
Oct-23	0	0
Nov-23	27331	25454
Dec-23	40060	38317
Total	**167206**	**163243**

As evident from above tables, the average waste water received at the ETP in the season 2021, 2022, 2023 was **653.52 KL/Day, 916.57 KL/Day** and **928.92 KL/Day** respectively and the average treated water from ETP in the year 2021, 2022, 2023 was **661.13 KL/Day, 890.19 KL/Day** and **906.90 KL/Day** respectively.

The average treated water ETP in the season 2023 is **928.93 KLD**. ETP plant has an installed capacity is 2200 KLD, whereas the treated average wastewater is 42.19 % of the rated capacity. Therefore, the effective capacity utilization of ETP is 42.19 %.

5.4 Environmental Compliance (Related To Water)

The maximum ground water requirement for the M/s Dhampur Bio Organics Limited (Unit: Meerganj, Division: Sugar) is 660 KLD however plant has obtained the NOC of water quantity 730 KLD from three tube wells and NOC for the same has been granted, and this total requirement of fresh water is fulfill by Ground water through 04 numbers of bore-wells within the plant site. The ground water withdrawal will be 660 KLD only, and should meet out by only one tube well. The second tube well will be used as standby.

- **Tube Well # 1**: Plant has a NOC to withdraw **55800.0 KL/year** from tube well # 1 with the Maximum Allowable Rate of Withdrawal of **155 m^3/hr** and Running hour not exceeding 2 hrs.
- **Tube Well # 2**: Plant has a NOC to withdraw **55800.0 KL/year** from tube well # 2 with the Maximum Allowable Rate of Withdrawal of **155 m^3/hr** and Running hour not exceeding 2 hrs.
- **Tube Well # 3**: Plant has a NOC to withdraw **3650 KL/year** from tube well # 3 with the Maximum Allowable Rate of Withdrawal of **05 m^3/hr** and Running hour not exceeding 2 hrs.
- **Tube Well # 4**: Plant has a NOC to withdraw **18000 KL/year** from tube well # 4 with the Maximum Allowable Rate of Withdrawal of **50 m^3/hr** and Running hour not exceeding 2 hrs.

The NOC has been issued by UPGWD (Uttar Pradesh Ground Water department) vide letter no **1. NOC038517. 2. NOC010362. 3. NOC0037781 4. NOC033613.** No new/additional ground water abstraction structures to be constructed for this purpose without prior approval from UPGWD. As per data provided by the plant, the total ground water abstraction in the year **2023 is 70851KL/year (BW#1 = 15449KL and BW#2 = 45543KL and BW#3 = 2255KL, BW#4 = 7604KL) i:e 394 KL/day** (considering @180 days) which is less than the NOC of 730 KLD issued to plant. This shows that Dhampur Bio Organics Limited (Unit: meerganj, Division: Sugar) comply with the NOC for ground water withdrawal of 133250 KL/year. NOC copy for Tube Well # 1, 2, 3 & 4 are attached as Annexure-B.

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TUBEWELL-1	TUBEWELL-2
TUBEWELL-3	**TUBEWELL-4**

Figure-15 bore well photo

2. No change of location, design, rate of withdrawal and pumping device in respect of the Proposed well as indicated at SL (2) and (3) of this certificate shall be made without prior permission of the Competent Authority. Any deviation in this regard shall lead to cancellation of this authorization. Audit team has checked the running parameters of all the bore wells. All four bore wells are operated as per the NOC.

3. For the purpose of measuring and recording the quantity of ground water extracted, every said user shall affix digital water flow meters (conforming to BIS/ IS standards) having telemetry system in the abstraction structure, which record rate and quantum of extraction, at outlet of pumping devices and it shall be presumed that the quantity recorded by the meter has been extracted by the said user, until the contrary is proved. The rate of extraction of ground water from the well shall not exceed to the recorded rate from water meters. M/s Dhampur Bio

Organics Limited (Unit: Meerganj, Division: Sugar) has installed digital flow meter with telemetry system on the existing four (04) borewell and maintaining the data on daily basis.

4. Construction of piezometers and installation of digital water level recorders with telemetry shall be mandatory for user. Depth and zone tapped of piezometer should be commensurate with that of the pumping well. The data, obtained from digital water level recorders shall be made available to UPGWD (Central Ground Water Authority) on monthly basis. Piezometer is a bore well /tube well used only for measuring the water level by lowering the tape/ sounder or automatic water level measuring equipment. It is also used to take water sample for water quality testing whenever needed. General guidelines for installation of piezometers are as follows for compliance of NOC:

a) The piezometer is to be installed/constructed at the minimum of 50 m distance from the pumping well through which ground water is being withdrawn. The diameter of the piezometer should be about 4‖ to 6‖.

b) The depth of the piezometer should be same as is case of the pumping well from which ground water is being abstracted. If, more than one piezometer are installed the second piezometer should monitor the shallow ground water regime. It will facilitate shallow as well as deeper ground water aquifer monitoring.

c) The measuring frequency should be monthly and accuracy of measurement should be up to cm. the reported measurement should be given in meter up to two decimals.

d) For measurement of water level sounder or automatic water level recorder (AWLR)/ Digital Automatic water level recorder (DWLR) with telemetry system should be used for accuracy.

e) The measurement of water level in piezometer should be taken, only after the pumping from the surrounding tube wells has been stopped for about four to six hours.

f) All the details regarding coordinates, reduced level (with respect to mean level), depth, zone taped and assembly lowered should be provided for bringing the piezometer into the Hydrograph Monitoring System for Ground Water Department, Uttar Pradesh, and for its validation.

g) No. of piezometers to be constructed & Type of water level monitoring mechanism shall be as per below table:

S. No	Quantum of Ground water withdrawal (cum/day)	No. of Piezometers Required	Monitoring Mechanism	
			Manual	Manual DWLR with Telemetry
1	< 10	0	0	0
2	11-50	1	1	0
3	50- 500	1	0	1
4	> 500	2	0	2

M/s Dhampur Bio Organics Limited (Unit: Meerganj, Division: Sugar) has obtained the NOC for 730 KLD from four tube wells. Since the plant has NOC to withdraw 730 KLD from four tube wells, Dhampur Bio Organics Limited (Unit: Meerganj, Division: Sugar) must install two piezometer with telemetry system. Plant has installed two (02) Piezometer with telematory system to execute the ground water regime. Here, industry is complying with condition of piezometer. Photographs of both the piezometer is given below:

Piezometer Image-1 | **Piezometer Image-2**

Figure-16; Piezometer Image-1, 2

5. The ground water quality has to be monitored twice in a year during pre-monsoon (May/June) and post-monsoon (October/November) periods. Quality may be got analyzed from NABL approved lab. Besides, one sample (1 lt. capacity bottle) to the concerned Director, Ground Water Department, Uttar Pradesh, for chemical analysis. The audit team has checked and verified all the water quality test reports. All of the reports comply with the environmental factors related to water uses and discharge. (Attached separately in Annexure-C).

6. A Permanent display board should be installed at piezometer/Tube wells site for providing the location, piezometer/ tube well number, depth and zone tapped of piezometer/tube well for

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standard referencing and identification. M/s Dhampur Bio Organics Limited (Unit: Meerganj, Division: Sugar) has provided display boards on all the locations as per the NOC.

CHAPTER 6
RAIN WATER HARVESTING

6. Rain Water Harvesting

The concept of rainwater harvesting is an ancient one and has become popular in recent times because of the vagaries of the monsoon, depleting water resources, its user friendliness. It has become an important and eco-friendly tool to protect ground water, useful and cost-effective method to boost water resources in any area. Rainwater harvesting is the technique of collection and storage of rainwater at surface or in sub-surface aquifers, before it is lost as surface run-off.

6.1 Rain Water Harvesting DBOL (Unit: Meerganj, Division: Sugar)

M/s Dhampur Bio Organics Limited (Unit: Meerganj, Division: Sugar) has implemented various measures to reduce water consumption in industrial premises and surrounding areas. In continuation of this Industry has made 02 nos. of rainwater harvesting pits for ground water recharge and developed 02 nos. ponds in and around the industrial premises for the storage and recharge of the rainwater.

- Three most important components, which need to be evaluated for designing a rainwater harvesting structure, are
- Hydrogeology of the area including nature and extent of aquifer, soil cover, topography, depth to water table and quality of ground water.
- Area contributing to runoff i.e., total area and land use pattern, whether industrial, residential or green belts and general built-up pattern of the area.
- Hydro meteorological characters viz. rainfall duration, general pattern of intensity of rainfall.

Based on the Runoff Coefficient the water harvesting potential of a site could be estimated using the formula given below

Water harvesting potential in m^3/year = Annual Rainfall (m) x Area of catchment (m2) x Runoff coefficient

6.2 Recharge by Percolation Ponds

Total 01 Numbers of ponds have been managed and adopted by the industry. Cleaning of the ponds has been done on periodic basis. The detail of all the 01 Ponds is listed below -

Table 19, Ground water recharge by percolation pond

Sr. No.	Village Name	Area (Hect.)	Depth	Volume (m^3)	Volume (m^3)/60%	No of filling	Recharge (m^3/annum)
1	Nagaria Sadat	0.873	3.0	26190	15714	3.0	47142
Total recharge through pond							47142

Pond Image

Pond Image

Figure-17; Pond Image

As per above calculation total 47142.0m^3 of water is being recharged through the ponds have been adopted by industry for below mentioned purposes:

1. Pond has been maintained and uses for the storing of the rain water and recharge of the ground water.
2. Collected water in the ponds is being utilized by villagers for their allied activities as and when required,
3. Some time it will be utilized for watering the greenbelt area.
4. The company has also taken up area specific plantation program to enhance the recharge measures.
5. Result of the recharge is that the ground water level is in rising trend in our and around the project location.

6.4 Recharge by Rain Water Harvesting Pits

Table 20, Recharge by RWH Pits

S. No.	Details	Values
Area Details:		
A	Roof top Area (m^2)	26500.0
Rainfall data:		
B	Average Annual rainfall (m)	1.21
Runoff coefficients:		
C	Runoff coefficient for roof top	0.85

Table 21, Water Quantity of Runoff Water

Sr. No	Details	Area (m^2)	Annual Rainfall (m)	Run-off coeff.	Total Runoff (m3 per Annum)
1	Roof top Area	26500.0	1.21	0.85	27255.25
Total Runoff water Quantity /annum (m^3/year)		26500.0			**27255.25**

Total Collected rainwater in the industrial premises is 27255.25m^3/annum. Total 02 Numbers of rainwater harvesting pits are constructed in the factory premises. The rainwater recharge details are as : - Total covered roof top area for rain water harvesting is 26500.0 m^2.

Water Recharge by Roof Top: Roof top area 26500.0 Sqm in Dhampur Bio Organics Limited (Unit: Meerganj, Division: Sugar). Water recharge through roof top 27255.25 KL/year Total water recharge (Recharge by Percolation Ponds+ Recharge by Rainwater harvesting pits) = 74397.25 KL/Year.

6.5 CONCLUSION

Present status and extraction of ground water in the project premises would not affect the potential and depletion of water level in surrounding areas due to Industries and Rainwater harvesting measures has been taken for groundwater recharge.

CHAPTER 7
DATA ANALYSIS AND RESULT

7.1 Season Wise Withdrawal and Consumption Details

7.1.1 Water consumption pattern

The water consumption pattern shows that out of total fresh water (394 m^3/day), about 13.45 % is used in domestic, about 20.81% of fresh water requirement for Sugar unit and rest 61.68 % of fresh water is utilised in Power plant for Cooling water and boiler makeup. Approx 4.06 % is unaccounted water. The tentative breakup of all areas is shown in the below table.

Table – 22, Water Utilisation scenario at the plant

Key Water Usage Section	Type of water used	Water Used to	Quantity Used (m^3/day)	Percentage (%)
Domestic	Fresh Water	Domestic & Residential colony	53	13.45
Sugar Plant	Fresh Water	Sugar Plant	82	20.81
Co gen Power Plant	Fresh Water	Power Plant	243	61.68
Unaccounted water	Fresh Water	-	16	4.06
Grand total			**394**	**100**

Table 23, Season Wise Extraction and Consumption Details

Sr. No.	Particulars	KL/Year
Bore well Water available in Plant		
1	Total Water Extracted from Bore well # 1	15449
2	Total Water Extracted from Bore well # 2	45543
3	Total Water Extracted from Bore well # 3	2255
4	Total Water Extracted from Bore well # 4	7604
5	Total Water Available for Plant	70851
Total Ground Consumed in Plant		
6	Total Bore well Water Consumed in Co-gen (Utility) (KL)	43721
7	Total Bore well Water Consumed in Process (Chemical Preparation (KL)	14677
8	Total Bore well Water Consumed in Domestic (KL)	9563

9	Total Water Consumed in Plant = 43721+14677+9563 = 67961	67961
10	Total Leakage/Unaccounted Loss in Bore well Water = 70851-67961= 2890	2890
	ETP	
11	Total ETP Inlet Water	151857
12	Total ETP Outlet Water	146922

Observations:

From the above table, it is seen that the water extraction and consumption is highest co generation power plant. In sugar unit. Mostly cane water is being utilised in the process.

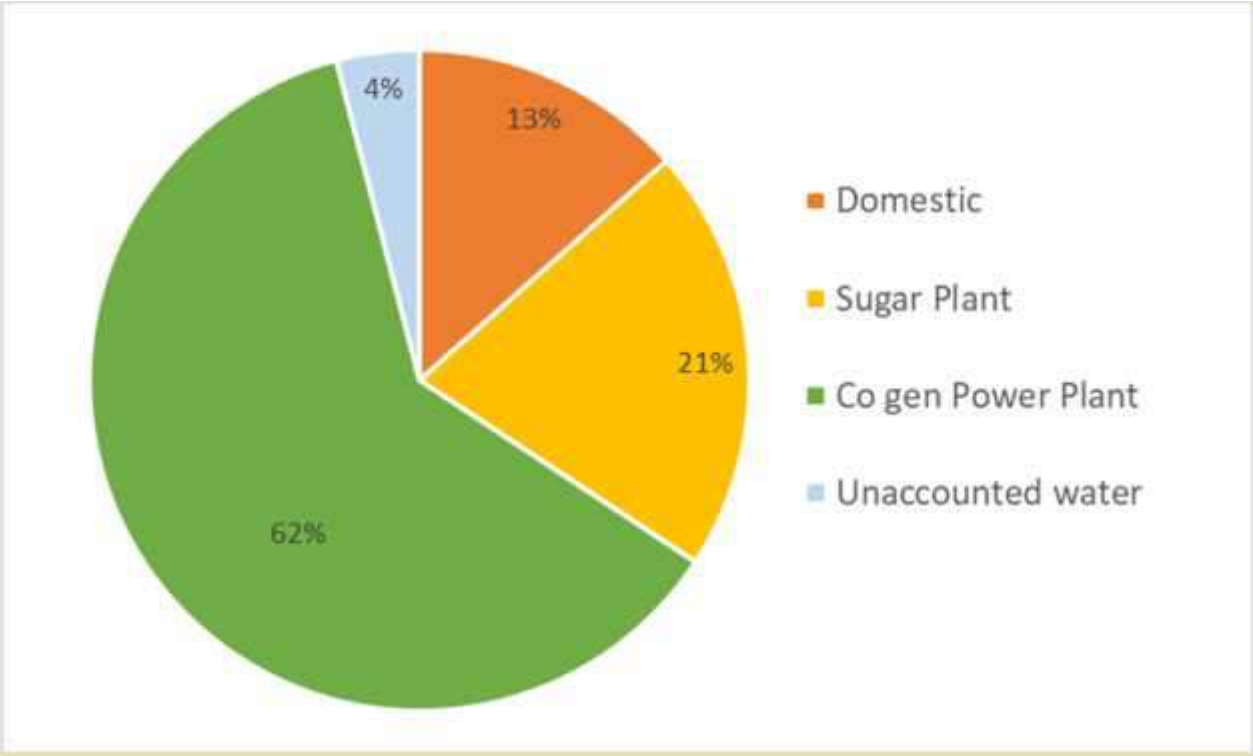

Fig -18.Area wise Water Consumption in the Sugar Plant

7.2. Total Raw Water Withdrawal, Consumption and Discharge Details (Last Three Years)

Audit team analysed the monthly data for Source, consumption and discharge from the year January-2021 to December-2023. Details provided in below table:

Table 24 Total Source, Consumption and Discharge Data

Month	Source (KL)	Consumption (KL)	Discharge Water (ETP Treated Water in the Irrigation of Factory Own Green Belt and Farmer Land/Field (KL)
Jan 2021 – Dec 2021			
Jan	11054	10603	21231

3256

840

Feb	11100	10647	21256
Mar	11494	11032	17624
Apr	7556	7255	13584
May	2898	2780	0
Jun	3337	3188	0
Jul	1218	1173	0
Aug	750	725	0
Sep	1357	1303	0
Oct	2072	1983	0
Nov	10351	9918	10663
Dec	7471	7177	27193
Total	70658	67785	111551
Jan 2022 – Dec 2022			
Jan	8107	7779	25799
Feb	9563	9176	24910
Mar	9898	9489	29677
Apr	9543	9130	15837
May	3775	3606	0
Jun	777	754	0
Jul	786	762	0
Aug	1443	1386	0
Sep	1035	1002	0
Oct	6173	5883	0
Nov	10061	9628	16966
Dec	7345	7060	28643
Total	68506	65657	141832
Jan 2023 – Dec 2023			
Jan	8654	8316	30837
Feb	8832	8487	25681
Mar	9756	9371	26937
Apr	9039	8643	11339
May	4825	4600	6819
Jun	779	756	0
Jul	817	792	0
Aug	814	790	0
Sep	1008	974	0
Oct	2845	2725	0
Nov	14250	13635	22564
Dec	9232	8872	36536
Total	70851	67961	160713

Observations:

- From the above table, it is seen that the water extraction and consumption is highest in winter season (December – January).

Table 25
Total raw water withdrawal for last three years (2021, 2022, 2023)

Month	Total Water Withdrawal fromBore well-1 (KL)	Total Water Withdrawal from Bore well-2 (KL)	Total Water Withdrawal from Bore well-3 (KL)	Total Water Withdrawal from Bore well-4 (KL)
Jan 2021 – Dec 2021	14322	46647	2272	7417
Jan 2022 – Dec 2022	20336	38735	2006	7429
Jan 2023 – Dec 2023	15449	45543	2255	7604

Table 26,
Break-Up of sources withdrawal pattern

Source	Total Raw water Withdrawal in Jan 23 – Dec 23, KL/Annum	Percentage (%)
Bore well no.1	15449	21.80
Bore well no.2	45543	64.28
Bore well no.3	2255	3.18
Bore well no.4	7604	10.73
Total	**70851**	**100.00**

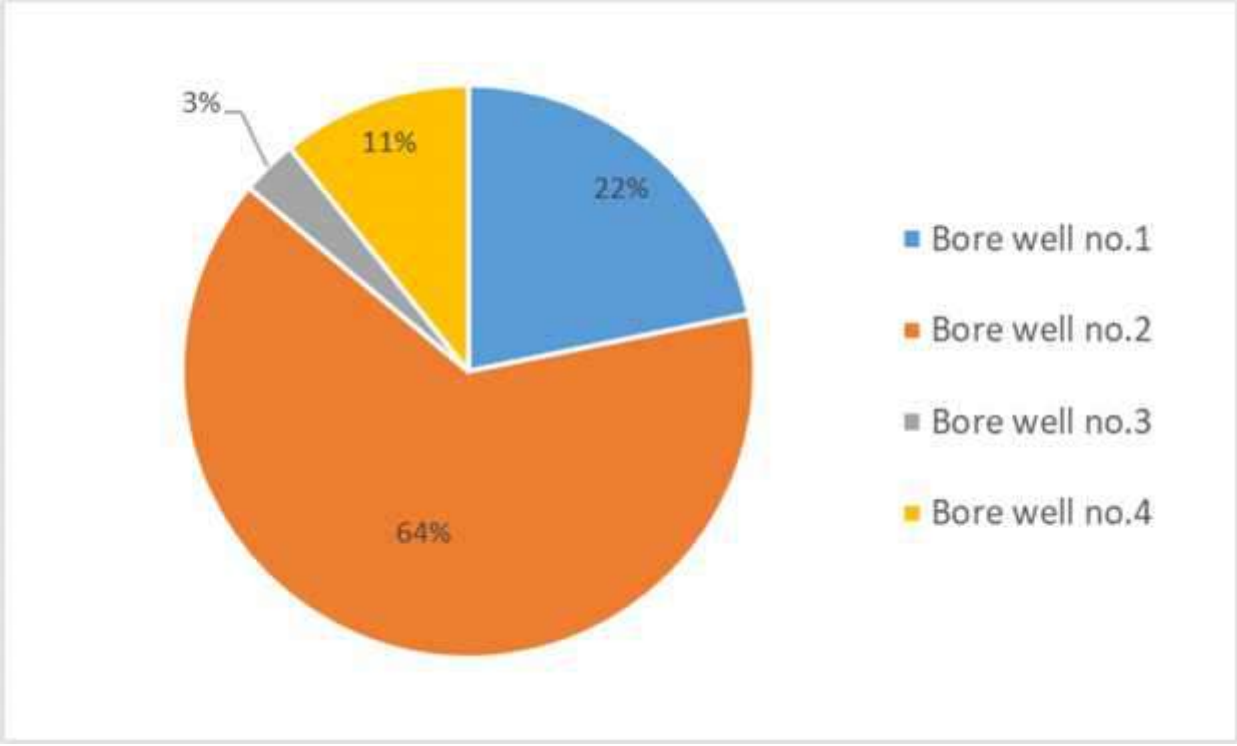

Figure -19, Total Raw water withdrawal in year 2023, KL/Annum

7.3 Wastewater generation and mapping

The total wastewater generation in the plant is about 928.9 m^3/Day or 167206 (m^3/Annum) including cane water, approx. 100 % (167206 m^3/annum) wastewater is generated from cane crushing & co gen power is treated in Effluent treatment plant - 2200 KLD. Approx. 96 % (892.85 m^3/day) or 160732 m^3/Annum wastewater is generated from ETP that is further treated used disposed as per GSR 35(E) dated 14th January 2016. (33 m^3/day) is generated by colony domestic sewage water, which is treated in STP and reused in Horticulture & irrigation. The breakup of wastewater generation from different sections is provided in below table.

Table 27 : Major Wastewater generating areas at DBOL, Unit- meerganj

Sr No	Major Section	Recycled / Discharge	Waste Water Generation (m^3/Day)	Percentage (%)
3.	ETP Treated Water	Disposed as per GSR (E) dated 14th January 2016	892.85	95.5
4.	STP Treated Water	Utilised within premises	42	4.5

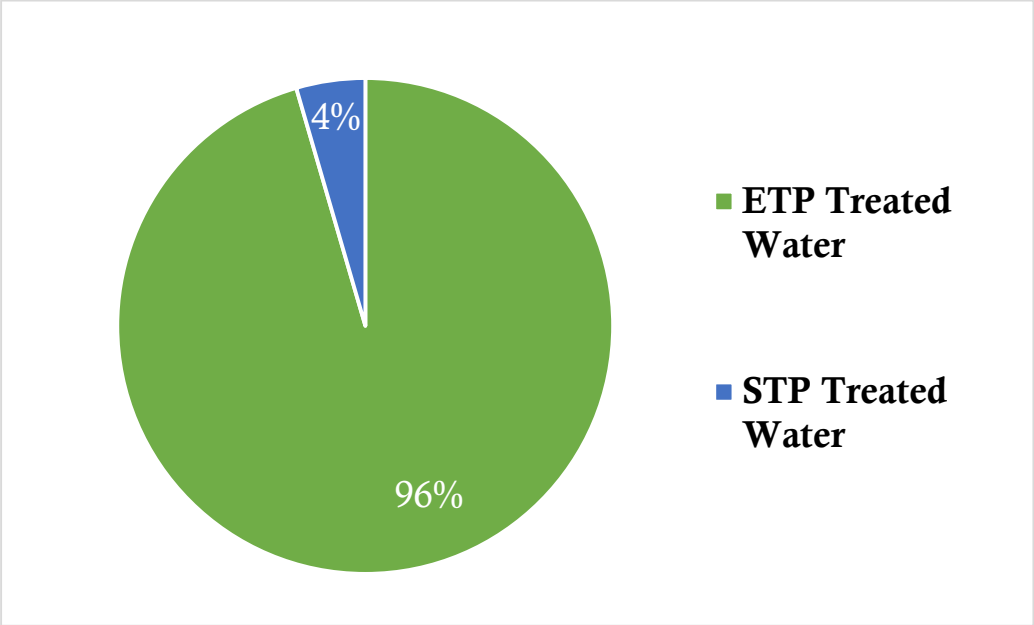

Fig :20, Percentage of wastewater generation at DBOL, Unit- Meerganj

7.4 Specific Water Consumption in terms of Water Use Ratio (WUR) of the Plant

Table 28: Specific Water Consumption of DBOL, Unit - Meerganj, 2021, 2022 & 2023

Particulars	Units	2021	2022	2023
Cane Crushed	Ton /day	7000	7000	9000
Total fresh water intake (Bore well)	m^3/day	392	380	394
Specific Water Consumption	m^3/Ton of cane crushed	0.056	0.054	0.044

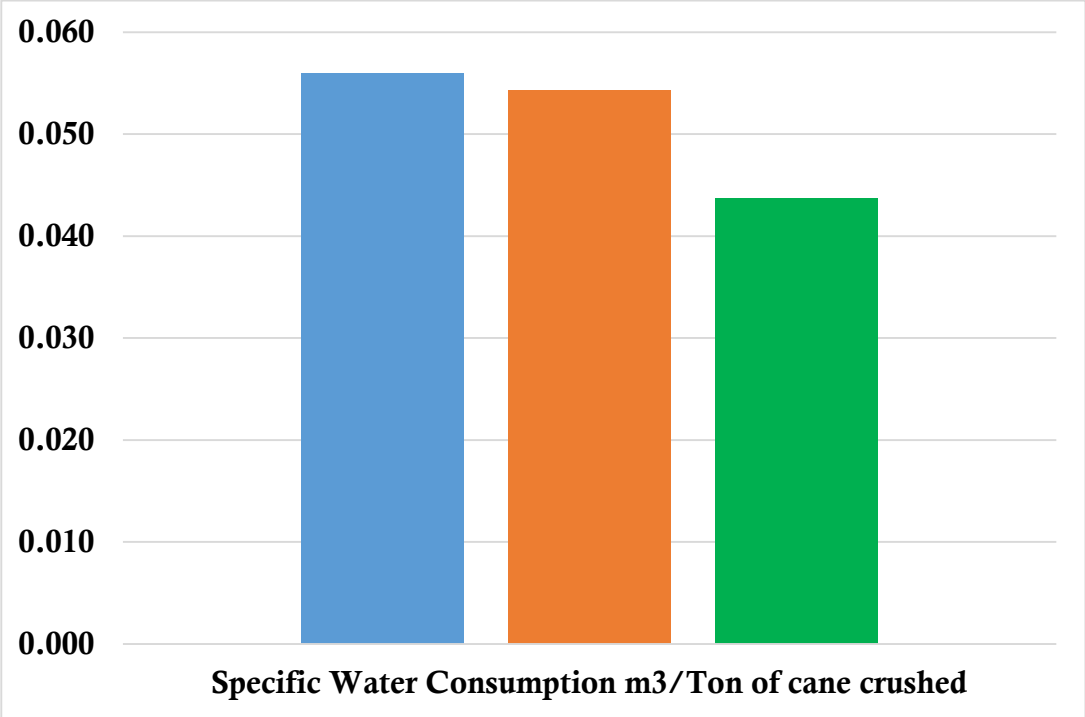

Figure 21: Water Usage Ratio

Over the three fiscal years from 2021 to 2023, there has been a noticeable trend in sugar production and associated water usage for a particular entity.

The specific water consumption, representing the volume of water used per ton of sugar produced, exhibited a fluctuating pattern. It started at 0.056 cubic meters per ton of Cane crushed in year 2021, decrease to 0.054 in year 2022, and then decrease to 0.044 in year 2023. Existing plant was under the expansion due to this Specific water consumption was also decrease as per the plant details. These statistics underscore the dynamic interplay between sugar production and freshwater utilization, with the specific water consumption acting as a crucial metrix reflecting the efficiency of water use in the production process. The trends observed over these years may prompt further analysis and strategic considerations to optimize both sugar production and water resource management.

CHAPTER 8
WATER CONSERVATION OPPORTUNITIES

8.0 Water Conservation Opportunities

Best management practices (BMPs) are a set of hands-on recommendations that help to identify opportunities and implement programs to save water in the plant. BMPs are developed for the various water-use categories in the office buildings and plant for monitoring and operational procedures. They are grouped according to indoor water use, outdoor water use, and monitoring and operational procedures. We can use toilet water- saving program by using part or all the BMPs depending on budget and environmental requirements. Tips and information are provided on water-saving amounts and cost recovery to help in prioritizing measures and make the most knock for buck.

Based on the information collected and observations, the following can be recommended to reduce water use and increase its efficiency.

8.1 Water Leakage in Plant

During the site survey leakages were found at some of the locations. All the leakages were quantified with the help of measuring beaker / measuring cylinder or any other form. Locations with the leakage quantity are mentioned in below table:

Table 29: Water Leakages in Plant

Sr. No	Particulars	Location	Leakage Value (liter/hr)	Running Hour	Quantity	Leakage Value (liter/day)
1	DM Water Pipe Line Valve	DM Plant	5	24	1	120
2	Bore well Valve Leakage Near Boiler	Near Boiler	150	2	1	300
3	DM Plant Valve Leakage-1	DM Plant	12	7	1	84
4	DM Plant Valve Leakage-2	DM Plant	10	7	1	70
5	Drinking Water Tap Leakage	Near Canteen	06	24	1	144
6	Cane Yard Drinking Water Tap Leakage	Cane Yard	04	24	1	96
7	Pipe Damage For Gardening	Near Main Gate	10	7	1	70
Total Leakage (Liter/day)						884
Total Leakage (KL/day)						0.884

- During the field trials, 0.884KLD water leakages were found at 07 different locations. Approximately 159.12 KL/year of water can be saved by arresting all the leakages in the

plant. It is recommended to stop all the leakages points by taking necessary action. Images showing leakages are shown in below figures:

Figure-22; Leakage location with photo

Sr.No	Leakage Location	Leakage Image
1	DM Water Pipe Line Valve	
2	Bore well Valve Leakage near boiler	
3	DM Plant valve leakage	

3262

846

4	DM Plant Valve Leakage	
5	Drinking Water Tap Leakage	
6	Cane Yard Drinking Water Tap Leakage	

3263
847

7	Pipe damage for gardening	

8.2 Faucets

8.2.1 Faucets in General Toilets Near Mill House, Canteen, Production office, store, cane yard and guest house

Present Scenario

The audit team has conducted the flow sample measurement on existing taps installed in toilets wash basin of General Toilets Near Mill House, Canteen, Production office, store, cane yard and guest house Toilets to identify the water saving potential in faucets. It is observed that average flow of existing tap/faucets at toilet washbasin faucet is 7 Litters per Minute (LPM). Faucets flows can easily be reduced without affecting the comfort of the water user. Therefore, based on sample flow measurement, we recommend installing nozzle spray flow regulator faucets in General Toilets Near, Mill House, Canteen, Production office, store, cane yard and guest house Toilets faucets. This will result in impressive savings of around 50-60 percent of faucets water use. Total 25 nos. of wash basins faucets in General Toilets Near, Mill House, Canteen, Production office, store, cane yard and guest house Toilets were found where average flow is 7 Liters Per Minute (LPM).

Recommendation

We recommend installing nozzle spray flow regulator faucets in these 25 wash basin faucets to reduce the flow from **7 LPM to 3.5 LPM**. The daily water used in this 25-wash basin is **0.388 KL/Day**.

Water Savings Potential

It is assumed that by replacing old faucets with new nozzle spray flow regulator faucets, **0.194 KL/Day** of water can be saved in hand wash. Total **70.956 KL/year** of water will be saved by adding nozzle spray flow regulator faucets on existing 25 taps. The resultant benefit in terms of energy saving workout is **Rs. 177.39/year** with an estimated investment of **Rs. 5000** with the

simple payback period of 338 months. Water saving potential by adding nozzle spray flow regulator faucets are shown in below table

Table 30
Estimated Water Saving Potential by Replacing Wash basin in General Toilets Near, Mill House, Canteen, Production office, store, cane yard and guest house with nozzle spray flow regulator faucets

Sr. No.	Particulars	Unit	Value
1	Total No. of Wash basin in General Toilets NearB/W-1, Mill House, Canteen, DM Plant, ETP	-	25
2	Total No. of Employee used wash basin in General Toilets Near B/W-1, Mill House, Canteen, DM Plant, ETP	-	120
3	Present Average flow of One Faucet	LPM	7
4	Water used in wash basin for one Wash	Liter	0.81
5	Approximate No. of Times Hand Wash by SingleEmployee	-	4
6	Total Daily Water Consumption in Wash Basin	KL/day	0.3888
7	Present Total Annual Water Consumption in Washbasin (consider 365 days)	KL/year	141.912
8	Total Annual Water Consumption by Reducing flow to 50%	KL/year	70.956
9	Annual Monetary Saving by Reducing Flow to 50%	KL/year	70.956
10	Average Cost of Bore well Water	Rs. /KL	2.5
11	Total Annual Saving in Bore Well Water	Rs.	177.39
12	Estimated Investment by adding Nozzle Spray FlowRegulator to reduce flow @ Rs. 200 for Single Nozzle Spray Flow Regulator, Total No. of Hand Wash = 25	Rs.	5000
13	Simple Payback period	Months	338.00

8.3 Flush Tanks

8.3.1 Toilet near Cane Yard, Store House, Guest House, Canteen Toilet ,Driver Waiting Room

Present Scenario:

The audit team has conducted the survey of Toilet near Cane Yard, Store House, Guest House, Canteen Toilet, Driver Waiting Room. There are total 15 flush tanks installed in toilet, having old system of flushing by pressing push button having water consumption of 6 Litre/Flush.

Recommendation:

A dual-flush toilet is a variation of the flush toilet that uses two buttons or handles to flush different levels of water. A significant way to save water in buildings is to replace single- flush toilets with dual flush toilets. The standard dual-flush toilets use six Litters of water on full and three Litters on a half- flush.

Replacing old toilets will result to a reduction of toilet water consumption. More cost- effective results can be achieved by replacing only the toilet trim system.

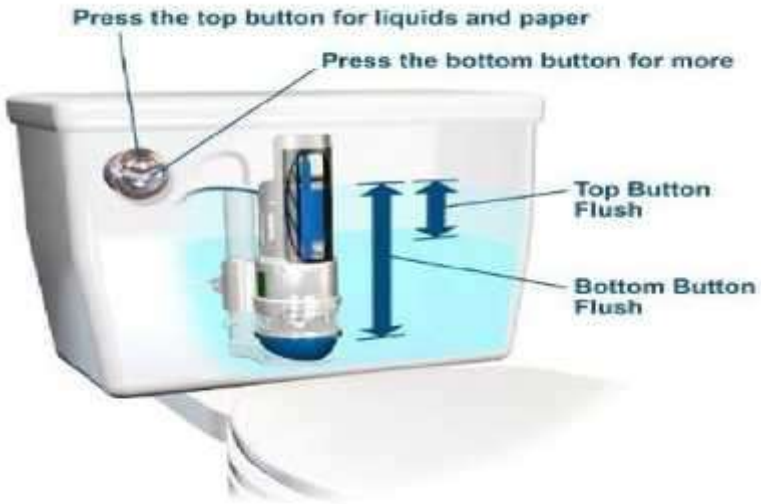

Figure-23; New System of Flushing

The total water consumption in Flush Tanks is 131.4KL/year, this can be reduced by 50%. Here we recommend installing dual flush system in toilets flush tanks.

Water Savings Potential

It is assumed that by reducing the flow with dual flush cistern, 50% i.e. 0.18 KL/Day of water can be saved in flush tanks. Total **65.7KL/year** of water will be saved by adding dual type flush tanks in existing 15 tanks. The resultant benefit in terms of energy saving workout is Rs. **164.25/year** with an estimated investment of Rs. **15,000** with the simple payback period of **1095 months**. Water saving potential for installing dual flush system in all **15 flush** tanks is provided in below table:

Table 31
Estimated Water Saving Potential for installing Dual Flush Cistern in 15 flush tank in Toilet near Cane Yard, Store House, Guest House, Canteen Toilet, Driver Waiting Room

Sr. No	Particulars	Unit	Value
1	Total no of flush tank in Toilet near Cane Yard, Store House, Guest House, Canteen Toilet, Driver Waiting Room	-	15
2	Total No. of Employee in Toilet near Cane Yard, Store House, Guest House, Canteen Toilet, Driver Waiting Room	-	60
3	Water consumed in one flush.	Liter	6
4	Approximate No. of Times Toilet use by Single Employee	-	1
5	Avg. Daily flush water requirement in toilets	KL/day	0.360
6	Present Total Annual Water Consumption in Flush using old system of flushing (considering 365 days)	KL/year	131.4
7	Total Annual Water saved 50% by using dual flushcistern (109.5x 50%=54.75)	KL/year	65.7
8	Average Cost of Bore well Water	Rs. /KL	2.5
9	Total Annual Saving of Bore well Water	Rs. /year	164.25
10	Estimated Investment by adding dual flush cistern oneach Toilet @ Rs. 1000 for dual flush cistern,	Rs.	15000
11	Simple Payback period	Months	1095.00

8.4 General tips for water conservation

8.4.1 Toilet Tank Bank

With economical, maintenance free _Green Toilet Bank' it is very easy to save water on toilet flushing, it helps to save 3 litres water on every flushing, with no sacrifice on performance. Toilet Bank filled with water is hanged inside the toilet-flushing tank or reservoir. It will displace an amount of water equivalent to 3 Litres in the tank, which means every flush we will save water, thus saving you money. Less the water you use, the less you need to recycle.

Figure-24; Toilet Tank Bank

8.5 Saving Water through Monitoring And Operational Procedures

8.5.1 Identifying and Fixing Leaks

The hidden water leaks can cause loss of considerable water and energy without anyone being aware of it. A small leak can amount to large volumes of water loss. Leaks become larger with time, and they can lead to other equipment failure. Fix that leaky pipe, toilet, faucet, or roof top tank to save considerable amount of money and water. The establishment of a leak detection and repair program

would be a most cost-effective way to save money and water in the Plant premises. Following are some best practices to identify and fixing leaks:

The Management must be committed for providing the staff and resources needed to maintain plumbing fixtures and equipment on a regular basis and assuring prompt identification and repair of leaks.

- Repair staff is given the tools needed and is trained to make leak repair a priority activity.
- Staffs are taught to report leaks and other water-using equipment malfunctions promptly.
- Staffs are rewarded for success.
- Rooftop tank overflow or leakage water should flow to rainwater gutter system not to sewage system to allow detection of rooftop water loss.

- Records of the type, location, number, and repair of leaks are kept in a central location.

8.5.2 Water Metering and Sub-metering

The metering and sub-metering of the Plant's water use is essential to understand the water consumption pattern inside the Plant. The accurate measurements enable management to understand maximum and minimum consumption area in the Plant and improve water efficiency in the Plant. Monitoring the water use allows management to know where and when water is being used and where the best opportunities for water savings exist. The Plant already had meters installed in their premises, however in some places such as in the RO Plant supplying Drinking Water, the meters were not functioning and hence it is recommended to replace the faulty meters with new Digital Flow meters.

CHAPTER 9

IMPLEMENTATION PLAN

9.1 Implementation Plan

The Audit team has conducted detail audit of Water Sources, Consumption Area and Discharge side of Dhampur Bio Organics Limited (Unit: meerganj, Division: Sugar)and noticed that the plant officials has maintained water sources and water treatment plant properly. There are few recommendations provided by the audit team. The recommendation/implementation plans are provided below:

Summary of Implementation Plan

Sr. No.	Section/Area	Key Observations	Recommendations	Annual Water Savings (KL/year)	Annual Monetary Savings (Rs.)	Investment (Rs.)	Pay-back Period (Months)
I	Total Bore well Water Intake			70851			
II	Bore well Water Saving Achievable			295.77			
Option 1: Short Term Benefits							
1	Total Leakage in Plant	Arrest all leakage points	We recommend arresting all the leakage points. Arresting these leakage points total 159.12 KL/year of water will be saved.	159.12	397		
Option 2: Long Term Benefits							
2	Faucets in General Toilets Near Mill House, Canteen, Production office, store, cane yard and guest house.	Total 25 nos. of wash basins faucets in General Toilets Near, Mill House, Canteen, Production office, store, cane yard and guest house Toilets were found where average flow is 7 Liters Per Minute (LPM).	We recommend installing nozzle spray flow regulator faucets in these 25 wash basin faucets to reduce the flow from 7 LPM to 3.5 LPM. The daily water used in this 25-wash basin is 0.388 KL/Day.	70.956	177.39	5000	338.0

3	Flush Tanks in Toilet near Cane Yard, Store House, Guest House, Canteen Toilet ,Driver Waiting Room	The audit team has conducted the survey of Toilet near Cane Yard, Store House, Guest House, Canteen Toilet, Driver Waiting Room. There are total 15 flush tanks installed in toilet, having old system of flushing by pressing push button having water consumption of 6 Litre/Flush.	A dual-flush toilet is a variation of the flush toilet that uses two buttons or handles to flush different levels of water. A significant way to save water in buildings is to replace single- flush toilets with dual flush toilets. The standard dual-flush toilets use six Litters of water on full and three Litters on a half- flush.	65.7	164.25	15000	1095
4	Regularly calibrate & maintain existing water flow meters	It was observed that the existing bore well meter are installed and calibrated	It is suggested to continue to calibrate and maintain the existing flow meters.	Monitoring Water consumption patterns	Efficient Water Accounting	Low	-
5	Water Flow Meters	It was observed that the plant has installed water flow meter in bore well. But water flow meter is not in proper line location.	It is suggested to re installed the mtr at bore well at right location (after the bore well discharge)	This will help to know the right & actual flow value	Efficient Water Accounting	Low	-
6	Maintain logbook of daily groundwater abstraction	It was observed that the plant is maintaining data of daily groundwater abstraction	The proposed digital flow meter with telemetry will be equipped with online data recording facility	It will help to know the daily water consumption	Efficient Water Accounting	Low	-
7	Regular payment of applicable groundwater abstraction charges	It was observed that plant team is regularly paying the applicable ground water charges to concern authority	It is suggested to maintain the same				

8	Ensure to comply with the NOC conditions to avoid any penalty	It was observed that plant team is meeting all applicable compliance	It is suggested to maintain the same				
9	Borewell Water Flow meters	Existing Borewells was not having concrete structure as per CGWA guidelines	We recommend to construct the proper concrete structure as per CGWA Guideline	-	-	-	-
10	Periodically conduct 'Water & Wastewater Audit'	Plant has formed a cell for assessment of potential for water & wastewater management in the plant for water saving & wastewater management.	Conduct periodic 'Water Audit' at least once in 2-3 years either by an Experienced external Audit Team to assess the efficiency of water usage in processes; reduce water losses in the system and optimize costs & energy consumption.	Efficient water & wastewater management	Evolveigs chemes leading to water and associated cost savings	Low	
11	Enhance Training and Awareness of the Employees at all Levels and Placing 'Water Saving 'posters/Slogans at various Locations	Plant is regularly conducting Training and Awareness of the Employees, events to promote water conservation like celebration of world water day, world environment day" and Placing 'Water Saving' Posters/Slogans at various Locations.	Maintain the system and suggested to keep continue the water conservation activities and promotion in the plant.	Reduction in Freshwater Use due to awareness & training	Water cost savings due to reduced water use	Low	-
TOTAL				**136.65**	**341.64**	**20000**	**1433**

Annexure 18

IN THE HIGH COURT OF DELHI AT NEW DELHI

WRIT PETITION (CIVIL) 10592 OF 2022

IN THE MATTER OF:

M/S DHAMPUR BIO ORGANICS LTD …PETITIONER

VERSUS

UNION OF INDIA & ANR …RESPONDENT

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New Delhi

Dated 08.05.2023

Respondent 2

Through

Standing Counsel for the Respondent 2
Arvind Kumar
B-3, First Floor, Jangpura Extension,
New Delhi -110014
Mob 9868001254
Email: arvindkumar2003@gmail.com
adv.vatsankit@gmail.com

Parawise instructions of writ petition (civil) no. ---------- of 2022 in the matter of M/s Dhampur Bio Organics Ltd. V/s Union of India before in the High Court of Delhi at New Delhi Extra ordinary Civil Writ jurisdiction – 856

In above mentioned matter, parawise instruction are as follows –

1. This is matter of record. Further, it is submitted that in compliance to Hon'ble NGT order dated 29-04-2022 in O.A. No. 291/2022 Naresh Kumar Vs State of U.P. & Ors, joint committee comprising of CPCB, SPCB and District Administration, Sambhal has scheduled on 14-07-2022 for the inspection of the said unit. During visit representative of unit provided a copy of stay order issued by Hon'ble High Court of Delhi against said order dated 29-04-2022 of Hon'ble NGT and due to that the joint committee decided to postpone the inspection of the said unit

(a) Needs no reply.

(b) (i) This is matter of record, Further, Hon'ble NGT vide order dated 09-11-2022 in O.A. No. 291/2022 had directed that the case is adjourned to 10-01-2023 for awaiting further order from Hon'ble High court of Delhi. In compliance of the direction of Hon'ble NGT dated 10-01-2023 the inspection of M/s Dhampur Bio Organic Ltd. formely know as (DSM, Sugar unit, Asmoli, District Sambhal) was carried out by officials of RO, UPPCB, Moradabad on 13-01-2023 and during visit unit was found compliant. Report is annexed as **Annexure-1**.

(ii) Matter of record. Further, during visit the complainant could not be located in village Asmoli, District Sambhal which was also confirmed by Gram Pardhan of village Asmoli Smt. Dolly w/o Shri Mahaveer Singh when contacted. She was also unaware about the said complainant. In the context a letter no. 59/N-13/539/291/2022 dated 13-01-2023 was sent to Circle Officer (Police), Sambhal to get details of the said complainant and Circle Officer (Police), Sambhal vide its letter dated 16-01-2023 has informed that the complainant Shri Naresh Kumar S/o Shri Guljari lal is not residing in village Asmoli, District Sambhal. Copy is annexd as **Annexure -2**.

(c) Needs no reply.

(d) Needs no reply.

(e) Matter of record. Further, during visit unit was found fully compliant.

(f) Needs no reply.

(g) Needs no reply.

2. Needs no reply.

3. Needs no reply.

4. Needs no reply.
5. Needs no reply.
6. Needs no reply.
7. Needs no reply.
8. Needs no reply.
9. Needs no reply as stated.
10. Needs no reply.
11. (a) Needs no reply as stated.

(b) Needs no reply as stated.

(c) Needs no reply as stated.

(d) Needs no reply.

(e) Needs no reply.

12. Needs no reply.
13. Needs no reply.

(S.S. Chauhan)
Asstt.Scientific Officer

Annexur 858

क्षेत्रीय कार्यालय
उ0प्र0 प्रदूषण नियंत्रण बोर्ड
1–ए/आई.एन.एस.–1, आवास विकास कालोनी, बौद्ध विहार,
दिल्ली रोड, मुरादाबाद
ई–मेल : romoradabad@uppcb.in, दूरभाष : 0591–2972012

पत्र संख्या 69...../एन–13/291/539/2022/जनरल

दिनांक 16.01.2023

सेवा में,

मुख्य पर्यावरण अधिकारी (वृत्त–7),
उ0प्र0 प्रदूषण नियंत्रण बोर्ड,
लखनऊ।

विषय : मा0 राष्ट्रीय हरित अधिकरण, नई दिल्ली द्वारा ओ.ए. संख्या 291/2022 नरेश कुमार बनाम स्टेट आफ यू0पी0 में दिये गये निर्देश के संबंध में।

महोदय,

कृपया उपरोक्त विषयक का संदर्भ ग्रहण करने का कष्ट करें, जिसके अनुपालन में अवगत कराना है कि अधोहस्ताक्षरी द्वारा संदर्भित उद्योग मैसर्स धामपर बायो आर्गेनिक्स लि0, असमौली, जनपद सम्भल का निरीक्षण कार्यालय के सहायक वैज्ञानिक अधिकारी के साथ दिनांक 13.01.2023 को किया गया। मा0 अधिकरण. द्वारा पारित निर्देशों की अनुपालन आख्या समस्त संलग्नों सहित आपके अवलोकनार्थ एवं अग्रिम आवश्यक कार्यवाही हेतु प्रेषित की जा रही है।

भवदीय

(विकास मिश्र)
क्षेत्रीय अधिकारी

Inspection report of M/s Dhampur Bio Organics Ltd. formerly known as (DSM Sugars Unit, Asmoli, Dist. Sambhal) on 13.01.2023 in compliance to direction issued by Hon'ble NGT in O.A. No. 291/2022 Naresh Kumar Vs State of U.P. & Ors.

Hon'ble NGT vide order dated 29.04.2022 in matter of Naresh Kumar Vs State of U.P. & Ors. in O.A. No. 291/2022 had directed following-

"2. In view of the serious allegations made in the present letter Petition, it would be appropriate to have a factual and action taken report from a Joint Committee comprising of CPCB, State PCB and District Magistrate, Moradabad. The State PCB will be the Nodal agency for coordination and compliance. The Joint Committee may meet within four weeks, undertake site visits, look into the grievances of the applicants and take requisite action by following due process of law. Factual and action taken report, providing status of compliance with CTO conditions and mode of disposal of effluents as well as status of ground water which is reported to be Yellow in color, may be furnished within two months by e-mail at judicial-ngt@gov.in preferably in the form of searchable PDF/OCR Support PDF and not in the form of Image PDF."

In compliance to the afore said direction joint committee has scheduled on 14 July, 2022 for inspection of the said unit. During visit representative of unit provided a copy of stay order issued by Hon'ble High court, Delhi against said order dated 29.04.2022 of Hon'ble NGT. Further, as per the direction of Hon'ble NGT dated 10.01.2023, the inspection of M/s Dhampur Bio Organics Ltd. formerly known as (DSM Sugars Unit, Asmoli, Dist. Sambhal) was carried out by officials of RO, UPPCB on 13.01.2023 and interacted with the officials of the unit.

1- **M/s Dhampur Bio Organics Ltd. (formerly known as M/s DSM Sugars Unit, Asmoli), Asmoli, District Sambhal (Distillery Unit)-**

i. The unit is engaged in production of Rectified Sprit/ENA/Absoulte Alcohal having capacity 325 KLD (From B-Heavy Molasses) or 250 KLD (From C-Heavy Molasses) or 325 KLD (From Sugar Syrup) and power Co-generation of 8.5 MW unit. During inspection unit was found operational.

ii. The unit is having valid Consent to Operate under section 25/26 of the Water (Prevention and Control of Pollution) Act, 1974 and section 21/22 of the Air (Prevention and Control of Pollution) Act, 1981 and. Which are valid upto 31.12.2025. The copies are annexed as **Annexure- 1.**

iii. The unit is also having valid authorization under the provisions of Hazardous and other wastes (Management and Transboundary Movement) Rules, 2016 for storage and disposal Hazardous wastes which is valid upto 02.06.2026. The copy is Annexed as **Annexure- 2.**

iv. The unit has obtained NOC from U.P. Ground Water Department for the abstraction of ground water which is valid upto 28.06.2026. The copy is annexed as **Annexure- 3.**

v. In unit approx 2110 m^3/Day spent wash is generated from the distillation process. The unit has installed Multi effect Evaporator (04 stage) capacity 1265 m^3/Day, (06 stage) capacity 1400 m^3/Day, Condensate polishing unit capacity 4500 m^3/Day, for treatment of spent wash. After concentration of spent wash/ Slop, it is used as fuel mixed with baggess in slop boiler.

vi. The unit has installed 02 nos of Slop boiler having capacity 35 TPH and 45 TPH. The bag filter is attached as APCS with 35 TPH boiler, the stack height is 70 meter from ground level. The boiler of 35 TPH is attached with Bag Filter followed by 70 meter high Stack, boilers of 45 TPH. The bag filter is attached as APCS with 35 TPH boiler, the stack height is 70 meter from ground level. During inspection APCS were found in operation and Stack monitoring was carried out. As per stack monitoring report SPM were found 46.66 mg/Nm^3 and 43.05 mg/Nm^3. As per stack monitoring report SPM was found within prescribes norms. The copies are annexed as **Annexure- 4.**

vii. The unit is registered member of M/s Bharat Oil & Waste Management Ltd., Kanpur for the safe disposal of hazardous wastes.

viii. The unit has installed a Lagoon of 4500 KL capacity for storage of concentrated spent wash for 07 days storage.

ix. The unit has installed mass flow meters at the inlet and outlet of MEE and web cameras installed at final outlet.

x. The unit is based on Zero Liquid Discharge (ZLD) for the treatment of spent wash. During inspection unit was maintaining ZLD process and no effluent was being discharged from outside the premises.

xi. House keeping of industry was not found proper.

2- M/s Dhampur Bio Organics Ltd. (formerly known as M/s DSM Sugars Unit, Asmoli), Asmoli, District Sambhal (Sugar Unit)-

i. The unit is a sugar mill having installed capacity of 9000 TCD and power Co-generation of 40 MW unit. The crushing for the year 2022-23 was started on 01.11.2022. During inspection unit was found in operation.

ii. The unit is having valid Consent to Operate under section 25/26 of the Water (Prevention and Control of Pollution) Act, 1974 and section 21/22 of the Air (Prevention and Control of Pollution) Act, 1981, which are valid upto 31.12.2023. The copies are annexed as **Annexure- 5&6.**

iii. The unit is also having valid authorization under the provisions of Hazardous and other wastes (Management and Transboundary Movement) Rules, 2016 for storage and disposal Hazardous wastes which is valid upto 27.12.2027. The copy is Annexed as **Annexure- 7.**

iv. The unit has obtained NOC from U.P. Ground Water Department for the abstraction of ground water which is valid upto 28.06.2026. The copy is annexed as **Annexure- 8.**

v. The unit is registered member of TSDF M/s Bharat Oil & Waste Management Ltd., Kanpur for the safe disposal of hazardous wastes.

vi. The unit has 03 nos of boiler having capacity 170 TPH, 70 TPH and 50 TPH. The boiler of 170 TPH is attached with (APCS) Electrostatic Precipitator (ESP) followed by 70 meter high Stack. Boilers 70 TPH & 50 TPH are attached to (APCS) as wet scrubber and multi cyclone respectably followed by common stack of 60 meter. During inspection APCS were found in operation. During, visit stack monitoring were carried out. As per stack monitoring report SPM were found 105.64 mg/Nm3 and 130.27 mg/Nm3. Which are within prescribed norms. The copy is annexed as **Annexure – 9.**

vii. The unit has provided OCEMS for continuous monitoring of emission parameters and found connected with CPCB server.

viii. Housekeeping of industry was not found proper.

ix. Water sprinkling was not found adequate in Bagasse yard.

x. The unit has installed ETP of capacity of 2500 KLD for the treatment of effluent from mill house, Boiling House, Cooling Tower & Spray pond over flow Etc. The ETP consists of Screen Chamber, Oil & Grease Traps, Equalization Tank, Primary Clarifier, Aeration Tank 1 & 2, Secondary Clarifier, Treated water Tank, Multi Grade Filter, Activated Carbon Filter, Sludge Drying Beds followed by CPU. The unit has provided Spray Pond over Flow treatment system consist of Holding Tank, Lime Mixing and Reaction Tank, Lamella Clarifier. During inspection ETP was found in operation and sample were collected from inlet of ETP, outlet of ETP, Storage Lagoon, Final outlet of unit. As per analysis report, the Parameter of treated effluent are within prescribed norms. The Copy is annexed as **Annexure – 10.**

xi. The unit has provided OCEMS at the outlet of ETP for continuous monitoring of treated effluent parameters and found connected with CPCB server.

xii. Finally effluent was found collected in lagoon and was used for the irrigation purposes in the nearby agriculture field. The capacity of lagoon is 16000 M^3 which is less than 15 days of holding capacity of treated effluent storage.

xiii. The unit has installed STP having capacity 60 KLD for treatment of sewerage generated from residential colony. The STP consist of collection Tank, Bar Screen Chamber, Oil & Grease Trap, Equalization Tank, FABR Tank, Tube Settler, Filter feed Tank, Multi Grade Filter, Activated Carbon Filter, Treated water Tank. During inspection STP was found in operation and sample was collected from outlet of STP. As per analysis report the parameters of treated effluent was found with in prescribed norms. The copy is annexed as **Annexure – 11.**

xiv. The treated effluent from the industry is discharged in to the Sot river after a distance of approx 1.0 Km through drain/ covered hume pipe. Nearby farmers are taking the treated water for irrigation purpose from same drain. A sample of treated effluent from outlet of the unit meeting to Sot river near Shamshan Ghat was collected. As per analysis report parameter were found within prescribed norms. The copy is annexed as **Annexure- 12.**

xv. During inspection Sot River was surveyed. It was observed that Sot River was found dry at upstream of the unit. There is no natural source of water in Sot river and therefore there is no flow of water in the upstream of unit.

xvi. After the discharge point of effluent in Sot river, Sot river was further surveyed. It was found that at Village Firozpur (Moradabad- Sambhal road bridge which is located at distance of 10-12 KM away from the unit) Sot river was found dry. Before such drying of Sot river, a small ponding was observed and sample was collected. As per analysis report parameter were found within prescribed norms. The copy is annexed as **Annexure- 13.**

xvii. Ground water sample from unit premises were collected. As per analysis report parameter were found within prescribed norms. The copy is annexed as **Annexure- 14.**

As illustrated above the details of several sampling points and results found in there analysis report is as tabulated below –

(A) – Effluent Samples

Sr. no.	Name of the sampling point	Results				
		pH	BOD (mg/l)	COD (mg/l)	TSS (mg/l)	TDS (mg/l)
	Standards	**5.5 – 8.5**	**30**	**250**	**30**	**2100**
1	Outlet of ETP	7.79	18	136	25	580
2	Storage Lagoon	7.21	16	128	22	590
3	Outlet of STP	8.25	9	88	8	320
4	Outlet of factory	7.56	20	160	27	570
5	Sot river (Near Shamshan Ghat, Asmoli)	7.63	16	144	-	280
6	Sot river (Vill. Firozpur, Sambhal)	8.17	9	104	-	760

(B)- Stack Monitoring -

Sr. no.	Details of Boiler	Parameters	
		Results PM (mg/Nm^3)	Standards PM (mg/Nm^3)
1	170 TPH	105.64	150
2	70 TPH, 50 TPH	130.27	150
3	45 TPH (Slop Boiler)	43.05	50
4	35 TPH (Slop Boiler)	46.66	50

The complainant Mr. Naresh Kumar S/o Gulzari Lal resident of village- Asmoli, District- Sambhal, could not be find out in the village– Asmoli, District- Sambhal and in the same context Gram Pradhan of village Asmoli Smt. Dolly W/O Shri Mahaveer Singh was contacted, who was also unaware about the said complainant. Gram Pradhan of village Asmoli Smt. Dolly W/O Shri Mahaveer Singh has given a written letter dated 15-01-2023 stating that any complainant Mr. Naresh Kumar s/o Gulzari Lal is not resident of village- Asmoli, District- Sambhal (Copy attached as **Annexure- 15**). In the same context a letter was sent by Regional Officer, U.P. Pollution Control Board, Moradabad to Circle Officer Police, Asmoli, District Sambhal to get the details of the said complainant Mr. Naresh Kumar S/o Gulzari Lal resident of village- Asmoli, District- Sambhal. Circle Officer Police, Asmoli, District Sambhal vide its letter dated 16-01-2023 has informed that complainant Mr. Naresh Kumar S/o Gulzari Lal is not residing in village Asmoli, District Sambhal. Copy annexed as **Annexure- 16.**

In the complaint made by Mr. Naresh Kumar S/o Gulzari Lal, village- Asmoli, District- Sambhal, it has been complained that the industry is discharging its polluted water via hume pipe line in drain which is finally connected to river Sot. The complainant further states that industry discharges its effluent in the night due to such discharge of effluent, crop gets burn and people are also suffering from various diseases.

District Horticulture Officer, Sambhal vide its letter dated 29.12.2021 has informed that any adverse effect on the crops was not observed due to M/s Dhampur Bio Organics Ltd. Copy annexed as **Annexure – 17.**

Office of the Executive Engineer, Block Office, U.P. Jal Nigam (Rural), Moradabad vide its letter dated 29.08.2022 has provided the ground water analysis report of several places nearby of the Dhampur Bio Organics Ltd. In such report, out of eight water samples collected, parameters of six samples are found within the norms and only parameters of turbidity of two samples are found to be 8.91 and 8.17 (against the normal range of 1-5). Copy annexed as **Annexure – 18.**

It is evident from above inspection report that industry is complying as per the norms and any adverse effect is not observed, which is also supported by the report given by the U.P. Jal Nigam and District Horticulture Officer.

(Sunil Singh Chauhan)
Assistant Scientific Officer

(Vikas Mishra)
Regional Officer

क्षेत्रीय कार्यालय
उ0प्र0 प्रदूषण नियंत्रण बोर्ड
1–ए/आई.एन.एस.–1, आवास विकास कालोनी, बौद्ध विहार,
दिल्ली रोड, मुरादाबाद
ई–मेल : romoradabad@uppcb.in, दूरभाष : 0591–2972012

पत्र संख्या 69...../एन–13/291/539/2022/जनरल

दिनांक 16.01.2023

सेवा में,

मुख्य पर्यावरण अधिकारी (वृत्त–7),
उ0प्र0 प्रदूषण नियंत्रण बोर्ड,
लखनऊ।

विषय : मा0 राष्ट्रीय हरित अधिकरण, नई दिल्ली द्वारा ओ.ए. संख्या 291/2022 नरेश कुमार बनाम स्टेट आफ यू0पी0 में दिये गये निर्देश के संबंध में।

महोदय,

कृपया उपरोक्त विषयक का संदर्भ ग्रहण करने का कष्ट करें, जिसके अनुपालन में अवगत कराना है कि अधोहस्ताक्षरी द्वारा संदर्भित उद्योग मैसर्स धामपर बायो आर्गेनिक्स लि0, असमौली, जनपद सम्भल का निरीक्षण कार्यालय के सहायक वैज्ञानिक अधिकारी के साथ दिनांक 13.01.2023 को किया गया। मा0 अधिकरण द्वारा पारित निर्देशों की अनुपालन आख्या समस्त संलग्कों सहित आपके अवलोकनार्थ एवं अग्रिम आवश्यक कार्यवाही हेतु प्रेषित की जा रही है।

भवदीय

(विकास मिश्र)
क्षेत्रीय अधिकारी

प्रेषक,

जिला उद्यान अधिकारी
सम्भल

N-13/539/2013
दिनांक 25/10/22

सेवा में,

क्षेत्रीय अधिकारी
क्षेत्रीय कार्यालय, उ०प्र० प्रदूषण नियंत्रण बोर्ड,
आवास विकास कालोनी, कृष्ण विहार, मुरादाबाद।

पत्रांक: 832 /उद्यान/2021-22/ दिनांक: 29.12.2021

विषय: एनजी टी आर्डर दिनांक 21 सितम्बर 2021 अमदिला अंसारी V/S थामपुर शुगर मिल्स - असमौली के सम्बंध में।

महोदय,

उपर्युक्त विषयक आपके पत्र संख्या 1837/N-13/539/2013/ जनरल/दिनांक 21.12.2021 के परिपालन में अवगत कराना है कि विकास खण्ड असमौली में स्थित मैसर्स थामपुर शुगर मिल्स लि० (शुगर एंड आसमी इकाई) असमौली जनपद सम्भल के संयुक्त निरीक्षण दिनांक 17 व 18.12.2021 में उल्लेखित उद्यान विभाग से सम्बंधित एवं डाटा निम्न विवरण अनुसार आपकी सेवा में आवश्यक कार्यवाही हेतु प्रेषित है।

1- विकास खण्ड असमौली में बागवानी के अन्तर्गत क्षेत्रफल 600 से 700 है०
2- विकास खण्ड असमौली में आलू की अन्तर्गत क्षेत्रफल 500 से 600 है०

थामपुर शुगर मिल्स लि० के 5 किलो मीटर रेडियस में उत्पादित की जाने वाली औद्यानिक फसलों का आच्छादन है-में।

1-	आमों की संख्या	- 40
2-	आलू का क्षेत्रफल	- 400 — 450 है०
3-	सब्जी का क्षेत्रफल	- 20 है०
4-	आम का क्षेत्र फल	- 63 है०
5-	अमरूद का क्षेत्र फल	- 3.2 है०

शुगर मिल्स के चलने का समय नवम्बर से अप्रैल तक होता है इससे हमारी फल वाली फसलों के उत्पादन पर कोई विपरीत प्रभाव नहीं पड़ता है क्योंकि आम की फसल में बौर का समय माह फरवरी से प्रारम्भ होता है तथा माह मार्च में आम बनना प्रारम्भ होता है तथा अप्रैल माह तक आम का साइज छोटा होता है जिससे आम की फसल पर इसका कोई दुष्प्रभाव नहीं पड़ता है। इसी प्रकार आलू एवं सब्जी की खेती पर भी चीनी मिल के धुंये का कोई अधिक प्रभाव नहीं पड़ता है। विकास खण्ड असमौली क्षेत्र के कृषकों से भी इस सम्बंध में कभी कोई शिकायत प्राप्त नहीं हुयी है। रिपोर्ट सेवा में सूचनार्थ एवं आवश्यक कार्यवाही हेतु प्रेषित है।

भवदीय

29/12/2021
जिला उद्यान अधिकारी
सम्भल

Scanned with Can

REGIONAL LABORATORY MORADABAD
UTTAR PRADESH POLLUTION CONTROL BOARD

1-A/1.N.S.-1, Avas Vikas Colony, Buddha Vihar, Delhi Road,Moradabad

Stack Emission Test Report

Ref No.19468560/Moradabad/2023 **Date: 16/01/2023**

1- **Name & Address of Industry:** DHAMPUR BIO ORGANICS LIMITED unit Asmoli Division Sugar
2- **Sample Collected By:** Anil Vishwkarma ,SA,Anjani kumar SHUKLA, LA,Rajendra Lal,JLA,Asif Ali,Jla
3- **Date of Monitoring:** 14/01/2023
4- **Source of Sampling:** Stack
5- **Stack attached to:** Boiler
6- **Stack Height:** 72.0 Meter
7- **Total No. of Boiler:** 01
8- **Capacity of Boiler:** 170.0 TPH
9- **Fuel used:** Bagasse
10- **Quantity of Fuel used:** 1600 TPD
11- **Flue Gas Velocity:** 8.25
12- **Air Pollution Control Device:** ESP
13- **Other remarks (if any):** -
14- **Further details of sample location nad Test methods followed are appened overleaf:**

Sr no.	Parameter	Unit	Result	Standards
1	PM	mg/Nm3	105.64	150.0

Analysed by-
[Vinay Kumar JRF]

Authorised Signatory-
Sunil Singh Chauhan
Digitally signed by Sunil Singh Chauhan Date: 2023.01.16 18:12:40 +05:30
Asstt. Scientific Officer

VIKAS MISHRA
Digitally signed by VIKAS MISHRA Date: 2023.01.16 18:16:20 +05:30
Regional Officer

REGIONAL LABORATORY MORADABAD
UTTAR PRADESH POLLUTION CONTROL BOARD

1-A/I.N.S.-1, Avas Vikas Colony, Buddha Vihar, Delhi Road,Moradabad

Stack Emission Test Report

Ref No.19468553/Moradabad/2023

Date: 16/01/2023

1- **Name & Address of Industry:** DHAMPUR BIO ORGANICS LIMITED unit Asmoli Division Sugar
2- **Sample Collected By:** Anil Vishwkarma ,SA,Anjani kumar SHUKLA, LA,Rajendra Lal,JLA,Asif Ali,Jla
3- **Date of Monitoring:** 14/01/2023
4- **Source of Sampling:** Stack
5- **Stack attached to:** Boiler
6- **Stack Height:** 70.0 M
7- **Total No. of Boiler:** 01
8- **Capacity of Boiler:** 70.0 TPH
9- **Fuel used:** Bagasse
10- **Quantity of Fuel used:** 630.0 TPD
11- **Flue Gas Velocity:** 7.33
12- **Air Pollution Control Device:** Wet Scrubber
13- **Other remarks (if any):** -
14- **Further details of sample location nad Test methods followed are appened overleaf:**

Sr no.	Parameter	Unit	Result	Standards
1	PM	mg/Nm3	130.27	150.0

Analysed by-
[Vinay Kumar JRF]

Authorised Signatory-
Sunil Singh Chauhan
Digitally signed by Sunil Singh Chauhan Date: 2023.01.16 19:55:41 +05'30'
Asstt. Scientific Officer

VIKAS MISHRA
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Regional Officer

REGIONAL LABORATORY MORADABAD
UTTAR PRADESH POLLUTION CONTROL BOARD

1-A/I.N.S.-1, Avas Vikas Colony, Buddha Vihar, Delhi Road,Moradabad

Stack Emission Test Report

Ref No.19468547/Moradabad/2023

Date: 16/01/2023

1- **Name & Address of Industry:** DHAMPUR BIO ORGANICS LIMITED UNIT ASMOLI DIVISION BIOFUELS and SPIRITS

2- **Sample Collected By:** Anil Vishwkarma ,SA,Anjani kumar SHUKLA, LA,Rajendra Lal,JLA,Asif Ali,Jla

3- **Date of Monitoring:** 14/01/2023

4- **Source of Sampling:** Stack

5- **Stack attached to:** Boiler

6- **Stack Height:** 77.0 M

7- **Total No. of Boiler:** 01

8- **Capacity of Boiler:** 45.0 TPH

9- **Fuel used:** Bagasse & Slope

10- **Quantity of Fuel used:** 290.0TPD & 64.0 TPD

11- **Flue Gas Velocity:** 7.84

12- **Air Pollution Control Device:** ESP

13- **Other remarks (if any):** -

14- **Further details of sample location nad Test methods followed are appened overleaf:**

Sr no.	Parameter	Unit	Result	Standards
1	PM	mg/Nm3	43.05	50.0

Analysed by-
[Vinay Kumar JRF]

Authorised Signatory-
Sunil Singh Chauhan
Asstt. Scientific Officer

VIKAS MISHRA
Regional Officer

REGIONAL LABORATORY MORADABAD
UTTAR PRADESH POLLUTION CONTROL BOARD

1-A/I.N.S.-1, Avas Vikas Colony, Buddha Vihar, Delhi Road,Moradabad

Stack Emission Test Report

Ref No.19468543/Moradabad/2023 **Date: 16/01/2023**

1- **Name & Address of Industry:** DHAMPUR BIO ORGANICS LIMITED UNIT ASMOLI DIVISION BIOFUELS and SPIRITS
2- **Sample Collected By:** Anil Vishwkarma ,SA,Anjani kumar SHUKLA, LA,Rajendra Lal,JLA,Asif Ali,Jla
3- **Date of Monitoring:** 14/01/2023
4- **Source of Sampling:** Stack
5- **Stack attached to:** Boiler
6- **Stack Height:** 70.0 M
7- **Total No. of Boiler:** 01
8- **Capacity of Boiler:** 35.0 TPH
9- **Fuel used:** Bagasse & Slope
10- **Quantity of Fuel used:** 240.0 TPD & 95.0 TPD
11- **Flue Gas Velocity:** 9.15
12- **Air Pollution Control Device:** Bag Filter
13- **Other remarks (if any):** -
14- **Further details of sample location nad Test methods followed are appened overleaf:**

Sr no.	Parameter	Unit	Result	Standards
1	PM	mg/Nm3	46.66	50.0

Analysed by-
[Vinay Kumar JRF]

Authorised Signatory-
Sunil Singh Chauhan
Asstt. Scientific Officer

VIKAS MISHRA
Regional Officer

REGIONAL LABORATORY MORADABAD
UTTAR PRADESH POLLUTION CONTROL BOARD

1-A/I.N,S.-1, Avas Vikas Colony, Buddha Vihar, Delhi Road,Moradabad

TEST REPORT: WATER LABORATORY(SURFACE WATER)

Ref no-19457599/Moradabad/2023 **Date:16/01/2023**

1- **Sample Location:** SOT RIVER, Near ShamShan Ghat, Asmoli
2- **District:** Sambhal
3- **Address:** NEAR SHAMSHAN GHAT, ASMOLI
4- **Sample Source:** River
5- **Type of sample :** Surface Water
6- **Sample Collected By :** S S Chauhan, ASO Anil Vishwkarma , SA
7- **Odour :** None
8- **Quantity and Packing :** 2 ltr
9- **Date of Sample Collection :** 13/01/2023
10- **Analyis Indented by :** RO Moradabad
11- **Date of sample receipt in Lab :** 13/01/2023

Parameter	Unit	Results	Detection Range
pH,4500 H B Electronic method	-	7.63	02-12
Colour,2120 B Visual Method	Hazen	Colourless	5-10000 Hazen
Suspended Solids , 2540 D Total Suspended Solids dried at 103-105 0C	mg/l	-	5.0 -10000 mg/l
Dissolved Solids, 2540 0C Total Dissolved Solids dried at 180 0C	mg/l	280	5.0 -10000 mg/l
BOD, 3 day 27 0C IS 3025 (Part 44): 1993 Bio	mg/l	16	1.0 -1000 mg/l
COD, 5220 B Open Reflux Method	mg/l	144	4.0 -1000 mg/l

Remark:* - NA

Analysed by
[Rajni Raj(JRF)]

Authorized by
Sunil Singh Chauhan
Asstt. Scientific Officer

VIKAS MISHRA
Digitally signed by VIKAS MISHRA
Date: 2023.01.16 18:14:31 +05'30'
Regional Officer

Note: 1 The results in the Test Report relate only to the items tested: 2. The report shall not be reproduced-except in full, without the written permission of laboratory. 3. The test report pertains to the sample as received in Lab.

REGIONAL LABORATORY MORADABAD
UTTAR PRADESH POLLUTION CONTROL BOARD

1-A/I.N.S.-1, Avas Vikas Colony, Buddha Vihar, Delhi Road,Moradabad

TEST REPORT: WASTE WATER LABORATORY

Ref No: 19457696/Moradabad/2023 **Date:16/01/2023**

1- **Name of Industry:** Dhampur Bio Organics Ltd.

2- **Address of Industry:** Vill. Asmoli Sambhal

3- **District:** Sambhal

4- **Description about sampling point:** Final Outlet of factory

5- **Type of Sample (Grab/Composite/Integrated):** Grab

6- **Sample Collected By:** S S Chauhan ASO & Anil Kumar SA

7- **Colour and Odour:** Colourless Odourless

8- **Quantity and Packing:** 2 Liter Plastic Can

9- **Date of Sample Collection:** 13/01/2023

10- **Analyis Indented by:** RO Moradabad

11- **Date of sample receipt in Lab:** 13/01/2023

Parameter/Method Name	Unit	Results	Standard	Detection Range
pH,4500 H B Electronic method	-	7.56		02-12
Suspended Solids , 2540 D Total Suspended Solids dried at 103-105 0C	mg/l	27.0		10-20000 mg/l
Dissolved Solids, 2540 C Total Dissolved Solids dried at 180 0C	mg/l	570.0		10- 50000 mg/l
BOD, 3 day 27 0C IS 3025 (Part 44): 1993 Bio	mg/l	20.0		1.0 -50000 mg/l
COD, 5220 B Open Reflux Method	mg/l	160.0		5.0 -100000 mg/l

Reference- (1)General Standards for discharge of envieronment Pollutants are as pert-A Effluent(Schedule-VI).The eniveronment (Protection) Rules,1986 source: www.cpcb.nic.in/GeneralStandards.pdf. Besides these standards,refer EPA standards for specific purpose

Remark: NA

Analysed by-
[Rajni Raj(JRF)]

Authorized by
SUNIL SINGH CHAUHAN Digitally signed by SUNIL SINGH CHAUHAN Date: 2023.01.16 19:42:50 +05'30'
Asstt. Scientific Officer

VIKAS MISHRA Digitally signed by VIKAS MISHRA Date: 2023.01.16 19:43:26 +05'30'
Regional Officer

Note: 1 The results in the Test Report relate only to the items tested: 2. The report shall not be reproduced-except in full, without the written permission of laboratory. 3. The test report pertains to the sample as received in Lab.

REGIONAL LABORATORY MORADABAD
UTTAR PRADESH POLLUTION CONTROL BOARD

1-A/I.N.S.-1, Avas Vikas Colony, Buddha Vihar, Delhi Road,Moradabad

TEST REPORT: WATER LABORATORY(GROUND WATER)

Ref No: 19457677/Moradabad/2023 **Date:16/01/2023**

1- **Sample Location:** Near Dhampur Bio Organics Ltd. Colony
2- **Address:** Vill. Asmoli Sambhal
3- **Distirct:** Sambhal
4- **Sample Source:** Other
5- **Type of sample :** Ground Water
6- **Sample Collected By :** S S Chauhan, ASO Anil Vishwkarma , SA
7- **Odour :** None
8- **Quantity and Packing :** 2 ltr
9- **Date of Sample Collection :** 13/01/2023
10- **Analyis Indented by :** RO Moradabad
11- **Date of sample receipt in Lab :** 13/01/2023

Parameter	Unit	Standards Source: IS 10500:2012(2nd Rev.) Required Acceptable Limit	Results	Detection Range
pH,4500 H B Electronic method	-	6.5-8.5	7.29	02-12
Turbidity,2130 B Nephelometric Method	N.T.U	1.00	0.19	1-500NTU
Colour,2120 B Visual Method	Hazen	5.00	Colourless	5-10000 Hazen
Dissolved Solids, 2540 C Total Dissolved Solids dried at 180 0C	mg/l	500	290.0	5-10000 mg/l
Hardness, 2340 C EDTA Titrimetric Method	mg/l	200	220.0	10-5000 mg/l
Calcium, 3500 -Ca B EDTA Titrimetric Method	mg/l	75	52.0	10-1000 mg/l
Magnesium, 3500 -Mg B Calculation Method	mg/l	30	21.6	10-1000 mg/l
Chloride as Cl-, 4500- Cl - B Argentometric Method	mg/l	250	1.99	3-500 mg/l

These standards are subject to revision

Remark:* - NA

Analysed by
[Rajni Raj(JRF)]

Authorized by
SUNIL SINGH CHAUHAN Digitally signed by SUNIL SINGH CHAUHAN Date: 2023.01.16 19:42:28 +05'30'
Asstt. Scientific Officer

VIKAS MISHRA Digitally signed by VIKAS MISHRA Date: 2023.01.16 19:43:13 +05'30'
Regional Officer

Note: 1 The results in the Test Report relate only to the items tested: 2. The report shall not be reproduced-except in full, without the written permission of laboratory. 3. The test report pertains to the sample as received in Lab.

REGIONAL LABORATORY MORADABAD
UTTAR PRADESH POLLUTION CONTROL BOARD

1-A/I.N.S.-1, Avas Vikas Colony, Buddha Vihar, Delhi Road,Moradabad

TEST REPORT: WATER LABORATORY(GROUND WATER)

Ref No: 19457673/Moradabad/2023 **Date:16/01/2023**

1- **Sample Location:** Infront of Dhampur Bio Organics Ltd., near Harpal singh House

2- **Address:** Vill. Asmoli Sambhal

3- **Distirct:** Sambhal

4- **Sample Source:** Handpump

5- **Type of sample :** Ground Water

6- **Sample Collected By :** S S Chauhan, ASO Anil Vishwkarma , SA

7- **Odour :** None

8- **Quantity and Packing :** 2 ltr

9- **Date of Sample Collection :** 13/01/2023

10- **Analyis Indented by :** RO Moradabad

11- **Date of sample receipt in Lab :** 13/01/2023

Parameter	Unit	Standards Source: IS 10500:2012(2nd Rev.) Required Acceptable Limit	Results	Detection Range
pH,4500 H B Electronic method	-	6.5-8.5	7.22	02-12
Turbidity,2130 B Nephelometric Method	N.T.U	1.00	2.40	1-500NTU
Colour,2120 B Visual Method	Hazen	5.00	Colourless	5-10000 Hazen
Conductivity,2510 B Lab Method	uS/cm	NS	574	0.1-10000 uS/cm
Suspended Solids , 2540 D Total Suspended Solids dried at 103-105 0C	mg/l	NS	-	5-10000 mg/l
Dissolved Solids, 2540 C Total Dissolved Solids dried at 180 0C	mg/l	500	440	5-10000 mg/l
Hardness, 2340 C EDTA Titrimetric Method	mg/l	200	360	10-5000 mg/l
Calcium, 3500 -Ca B EDTA Titrimetric Method	mg/l	75	88	10-1000 mg/l
Magnesium, 3500 -Mg B Calculation Method	mg/l	30	33.6	10-1000 mg/l
Chloride as Cl-, 4500- Cl - B Argentometric Method	mg/l	250	3.99	3-500 mg/l

These standards are subject to revision

Remark:* - NA

Analysed by
[Rajni Raj(JRF)]

Authorized by

Sunil Singh Chauhan

Asstt. Scientific Officer

VIKAS MISHRA

Regional Officer

Note: 1 The results in the Test Report relate only to the items tested: 2. The report shall not be reproduced-except in full, without the written permission of laboratory. 3. The test report pertains to the sample as received in Lab.

REGIONAL LABORATORY MORADABAD
UTTAR PRADESH POLLUTION CONTROL BOARD

1-A/I.N.S.-1, Avas Vikas Colony, Buddha Vihar, Delhi Road,Moradabad

TEST REPORT: WASTE WATER LABORATORY

Ref No: 19457730/Moradabad/2023

Date:16/01/2023

1- **Name of Industry:** Dhampur Bio Organics Ltd.

2- **Address of Industry:** Vill. Asmoli Sambhal

3- **District:** Sambhal

4- **Description about sampling point:** Inlet of ETP

5- **Type of Sample (Grab/Composite/Integrated):** Grab

6- **Sample Collected By:** S S Chauhan ASO & Anil Kumar SA

7- **Colour and Odour:** Turbid Sweetness

8- **Quantity and Packing:** 2 Liter

9- **Date of Sample Collection:** 13/01/2023

10- **Analyis Indented by:** RO Moradabad

11- **Date of sample receipt in Lab:** 13/01/2023

Parameter/Method Name	Unit	Results	Standard	Detection Range
pH,4500 H B Electronic method	-	5.69		02-12
Suspended Solids , 2540 D Total Suspended Solids dried at 103-105 0C	mg/l	208		10-20000 mg/l
Dissolved Solids, 2540 C Total Dissolved Solids dried at 180 0C	mg/l	650		10- 50000 mg/l
BOD, 3 day 27 0C IS 3025 (Part 44): 1993 Bio	mg/l	540		1.0 -50000 mg/l
COD, 5220 B Open Reflux Method	mg/l	1760		5.0 -100000 mg/l

Reference- (1)General Standards for discharge of envieronment Pollutants are as pert-A Effluent(Schedule-VI).The enviornment (Protection) Rules,1986 source: www.cpcb.nic.in/GeneralStandards.pdf. Besides these standards.refer EPA standards for specific purpose

Remark: NA

Analysed by-
[Rajni Raj(JRF)]

Authorized by

Sunil Singh Chauhan

Asstt. Scientific Officer

VIKAS MISHRA

Digitally signed by VIKAS MISHRA

Regional Officer

Note: 1 The results in the Test Report relate only to the items tested: 2. The report shall not be reproduced-except in full, without the written permission of laboratory. 3. The test report pertains to the sample as received in Lab.

REGIONAL LABORATORY MORADABAD
UTTAR PRADESH POLLUTION CONTROL BOARD

I-A/I.N.S.-1, Avas Vikas Colony, Buddha Vihar, Delhi Road,Moradabad

TEST REPORT: WASTE WATER LABORATORY

Ref No: 19457741/Moradabad/2023 **Date:16/01/2023**

1- **Name of Industry:** Dhampur Bio Organics Ltd.
2- **Address of Industry:** Vill. Asmoli Sambhal
3- **District:** Sambhal
4- **Description about sampling point:** Inlet of STP
5- **Type of Sample (Grab/Composite/Integrated):** Grab
6- **Sample Collected By:** S S Chauhan ASO & Anil Kumar SA
7- **Colour and Odour:** Turbid Odourless
8- **Quantity and Packing:** 2 Liter
9- **Date of Sample Collection:** 13/01/2023
10- **Analyis Indented by:** RO Moradabad
11- **Date of sample receipt in Lab:** 13/01/2023

Parameter/Method Name	Unit	Results	Standard	Detection Range
pH,4500 H B Electronic method	-	7.82		02-12
Suspended Solids , 2540 D Total Suspended Solids dried at 103-105 0C	mg/l	148		10-20000 mg/l
Dissolved Solids, 2540 C Total Dissolved Solids dried at 180 0C	mg/l	460		10- 50000 mg/l
BOD, 3 day 27 0C IS 3025 (Part 44): 1993 Bio	mg/l	105		1.0 -50000 mg/l
COD, 5220 B Open Reflux Method	mg/l	640		5.0 -100000 .ng/l

Reference- (1)General Standards for discharge of envieronment Pollutants are as pert-A Effluent(Schedule-VI).The eniveronment (Protection) Rules,1986 source: www.cpcb.nic.in/GeneralStandards.pdf. Besides these standards,refer EPA standards for specific purpose

Remark: NA

Analysed by-
[Rajni Raj(JRF)]

Authorized by
Sunil Singh Chauhan Digitally signed by Sunil Singh Chauhan Date: 2023.01.16 18:09:19 +05'30'
Asstt. Scientific Officer

VIKAS MISHRA
Regional Officer

Note: 1 The results in the Test Report relate only to the items tested: 2. The report shall not be reproduced-except in full, without the written permission of laboratory. 3. The test report pertains to the sample as received in Lab.

REGIONAL LABORATORY MORADABAD
UTTAR PRADESH POLLUTION CONTROL BOARD

I-A/I.N.S.-I, Avas Vikas Colony, Buddha Vihar, Delhi Road,Moradabad

TEST REPORT: WASTE WATER LABORATORY

Ref No: 19457727/Moradabad/2023

Date:16/01/2023

1- **Name of Industry:** Dhampur Bio Organics Ltd.

2- **Address of Industry:** Vill. Asmoli Sambhal

3- **District:** Sambhal

4- **Description about sampling point:** Outlet of ETP

5- **Type of Sample (Grab/Composite/Integrated):** Grab

6- **Sample Collected By:** S S Chauhan ASO & Anil Kumar SA

7- **Colour and Odour:** Colourless Odourless

8- **Quantity and Packing:** 2 Liter Plastic Can

9- **Date of Sample Collection:** 13/01/2023

10- **Analyis Indented by:** RO Moradabad

11- **Date of sample receipt in Lab:** 13/01/2023

Parameter/Method Name	Unit	Results	Standard	Detection Range
pH,4500 H B Electronic method	-	7.79		02-12
Suspended Solids , 2540 D Total Suspended Solids dried at 103-105 0C	mg/l	25		10-20000 mg/l
Dissolved Solids, 2540 C Total Dissolved Solids dried at 180 0C	mg/l	580		10- 50000 mg/l
BOD, 3 day 27 0C IS 3025 (Part 44): 1993 Bio	mg/l	18		1.0 -50000 mg/l
COD, 5220 B Open Reflux Method	mg/l	136		5.0 -100000 mg/l

Reference- (1)General Standards for discharge of envieronment Pollutants are as pert-A Effluent(Schedule-VI).The enivironment (Protection) Rules,1986 source www.cpcb.nic.in/GeneralStandards.pdf. Besides these standards,refer EPA standards for specific purpose

Remark: *NA*

Analysed by-
[Rajni Raj(JRF)]

Authorized by

Sunil Singh Chauhan

Asstt. Scientific Officer

VIKAS MISHRA

Regional Officer

Note: 1 The results in the Test Report relate only to the items tested: 2. The report shall not be reproduced-except in full, without the written permission of laboratory. 3. The test report pertains to the sample as received in Lab.

REGIONAL LABORATORY MORADABAD
UTTAR PRADESH POLLUTION CONTROL BOARD

1-A/I.N.S.-1, Avas Vikas Colony, Buddha Vihar, Delhi Road,Moradabad

TEST REPORT: WASTE WATER LABORATORY

Ref No: 19457724/Moradabad/2023 **Date:16/01/2023**

1- **Name of Industry:** Dhampur Bio Organics Ltd.

2- **Address of Industry:** Vill. Asmoli Sambhal

3- **District:** Sambhal

4- **Description about sampling point:** Storage Lagoon

5- **Type of Sample (Grab/Composite/Integrated):** Grab

6- **Sample Collected By:** S S Chauhan ASO & Anil Kumar SA

7- **Colour and Odour:** Colourless Odourless

8- **Quantity and Packing:** 2 Liter Plastic Can

9- **Date of Sample Collection:** 13/01/2023

10- **Analyis Indented by:** RO Moradabad

11- **Date of sample receipt in Lab:** 13/01/2023

Parameter/Method Name	Unit	Results	Standard	Detection Range
pH,4500 H B Electronic method	-	7.21		02-12
Suspended Solids , 2540 D Total Suspended Solids dried at 103-105 0C	mg/l	22		10-20000 mg/l
Dissolved Solids, 2540 C Total Dissolved Solids dried at 180 0C	mg/l	590		10- 50000 mg/l
BOD, 3 day 27 0C IS 3025 (Part 44): 1993 Bio	mg/l	16		1.0 -50000 mg/l
COD, 5220 B Open Reflux Method	mg/l	128		5.0 -100000 mg/l

Reference- (1)General Standards for discharge of envieronment Pollutants are as pert-A Effluent(Schedule-VI).The eniveronment (Protection) Rules,1986 source: www.cpcb.nic.in/GeneralStandards.pdf. Besides these standards,refer EPA standards for specific purpose

Remark: NA

Analysed by-
[Rajni Raj(JRF)]

Authorized by
Sunil Singh Chauhan
Asstt. Scientific Officer

VIKAS MISHRA
Regional Officer

Note: 1 The results in the Test Report relate only to the items tested: 2. The report shall not be reproduced-except in full, without the written permission of laboratory. 3. The test report pertains to the sample as received in Lab.

REGIONAL LABORATORY MORADABAD
UTTAR PRADESH POLLUTION CONTROL BOARD

1-A/I.N.S.-1, Avas Vikas Colony, Buddha Vihar, Delhi Road,Moradabad

TEST REPORT: WASTE WATER LABORATORY

Ref No: 19457738/Moradabad/2023 **Date:16/01/2023**

1- **Name of Industry:** Dhampur Bio Organics Ltd.
2- **Address of Industry:** Vill. Asmoli Sambhal
3- **District:** Sambhal
4- **Description about sampling point:** OUTLET OF STP
5- **Type of Sample (Grab/Composite/Integrated):** Grab
6- **Sample Collected By:** S S Chauhan ASO & Anil Kumar SA
7- **Colour and Odour:** colourless Odourless
8- **Quantity and Packing:** 2 Liter
9- **Date of Sample Collection:** 13/01/2023
10- **Analyis Indented by:** RO Moradabad
11- **Date of sample receipt in Lab:** 13/01/2023

Parameter/Method Name	Unit	Results	Standard	Detection Range
pH,4500 H B Electronic method	-	8.25		02-12
Suspended Solids , 2540 D Total Suspended Solids dried at 103-105 0C	mg/l	08		10-20000 mg/l
Dissolved Solids, 2540 C Total Dissolved Solids dried at 180 0C	mg/l	320		10- 50000 mg/l
BOD, 3 day 27 0C IS 3025 (Part 44): 1993 Bio	mg/l	09		1.0 -50000 mg/l
COD, 5220 B Open Reflux Method	mg/l	88		5.0 -100000 mg/l

Reference- (1)General Standards for discharge of envieronment Pollutants are as pert-A Effluent(Schedule-VI) The eniveronment (Protection) Rules,1986 source: www.cpcb.nic.in/GeneralStandards.pdf. Besides these standards,refer EPA standards for specific purpose

Remark: NA

Analysed by-
[Rajni Raj(JRF)]

Authorized by

Sunil Singh Chauhan
Asstt. Scientific Officer

VIKAS MISHRA
Regional Officer

Note: 1 The results in the Test Report relate only to the items tested: 2. The report shall not be reproduced-except in full, without the written permission of laboratory. 3. The test report pertains to the sample as received in Lab.

REGIONAL LABORATORY MORADABAD
UTTAR PRADESH POLLUTION CONTROL BOARD

1-A/I.N.S.-1, Avas Vikas Colony, Buddha Vihar, Delhi Road,Moradabad

TEST REPORT: WATER LABORATORY(SURFACE WATER)

Date:16/01/2023

Ref no-19481913/Moradabad/2023

1- **Sample Location:** SOT RIVER, D/S Firozpur

2- **District:** Sambhal

3- **Address:** VILL. FIROJPUR, SAMBHAL

4- **Sample Source:** River

5- **Type of sample :** Surface Water

6- **Sample Collected By :** Anil Vishwkarma , SA

7- **Odour :** None

8- **Quantity and Packing :** 2 ltr

9- **Date of Sample Collection :** 13/01/2023

10- **Analyis Indented by :** RO Moradabad

11- **Date of sample receipt in Lab :** 13/01/2023

Parameter	Unit	Results	Detection Range
pH,4500 H B Electronic method	-	8.17	02-12
Colour,2120 B Visual Method	Hazen	Slightly yellowish	5-10000 Hazen
Dissolved Solids, 2540 0C Total Dissolved Solids dried at 180 0C	mg/l	760	5.0 -10000 mg/l
BOD, 3 day 27 0C IS 3025 (Part 44): 1993 Bio	mg/l	09	1.0 -1000 mg/l
COD, 5220 B Open Reflux Method	mg/l	104	4.0 -1000 mg/l

Remark:* - NA

Analysed by
[Rajni Raj(JRF)]

Authorized by
Sunil Singh Chauhan
Digitally signed by Sunil Singh Chauhan Date: 2023.01.16 18:59:22 +05'30'
Asstt. Scientific Officer

VIKAS MISHRA
Digitally signed by VIKAS MISHRA Date: 2023.01.16 18:59:40 +05'30'
Regional Officer

Note: 1 The results in the Test Report relate only to the items tested: 2. The report shall not be reproduced-except in full, without the written permission of laboratory. 3. The test report pertains to the sample as received in Lab.

Annexure-2

880

क्षेत्रीय अधिकारी,
उ0प्र0 प्रदूषण नियंत्रण बोर्ड
मुरादाबाद,

कृपया आप अपने पत्रांक-59/एन-13/539/291/2022 दिनांक 13.01.2023 का संदर्भ ग्रहण करे। जो नरेश कुमार पुत्र गुलजारी लाल नि0 ग्राम व पोस्ट असमोली जनपद सम्भल के सम्बन्ध मे जानकारी कर आख्या उपलब्ध कराये जाने विषयक है।

उपरोक्त संदर्भ मे सादर अवगत कराना है कि श्री नरेश कुमार उपरोक्त के सम्बन्ध मे ग्राम प्रधान असमोली से जानकारी की गयी तो ग्राम व पोस्ट असमोली मे नरेश कुमार पुत्र गुलजारी लाल नाम के किसी व्यक्ति का निवास न करना बताया गया है। जिसके सम्बन्ध मे ग्राम प्रधान असमोली द्वारा अपना प्रमाण पत्र दिया गया है। जिसकी प्रति संलग्न कर प्रेषित है।

रिपोर्ट सादर अवलोकनार्थ प्रेषित है।

संलग्नक- यथोपरि
पत्रांक-एसटी-सीओजी-रिपोर्ट/2023
दिनांक-जनवरी . 2022

16/01/23
(संतोष कुमार सिंह)
क्षेत्राधिकारी असमोली,
जनपद सम्भल

881

ग्राम प्रधान असमोली

डोली
श्री महावीर सिंह
प्रधान असमोली
डाक- असमोली, जनपद सम्भल

मो० 8181811114

Date 16.01.2023

Ref no.....

प्रमाणित किया जाता है कि नरेश कुमार पुत्र श्री गुलजारीलाल नाम का कोई भी व्यक्ति ग्राम - असमोली पोस्ट - असमोली तहसील व जनपद - सम्भल का मूल निवासी नहीं है।

डोली
16/01/2023
श्रीमती डोली
प्रधान ग्राम पंचायत असमोली
वि०ख० असमोली, जिला सम्भल
Mobile 8181811114

डोली
ग्राम प्रधान असमोली

क्षेत्रीय कार्यालय
उ0प्र0 प्रदूषण नियंत्रण बोर्ड
1–ए/आई.एन.एस.–1, आवास विकास कालोनी, बौद्ध विहार,
दिल्ली रोड, मुरादाबाद
ई–मेल : romoradabad@uppcb.in, दूरभाष : 0591–2972012

पत्र संख्या 59 /एन–13/539/291/2022 दिनांक13.01.2023

सेवा में,

क्षेत्राधिकारी (पुलिस),
असमौली, जनपद सम्भल।

विषय : माननीय एन.जी.टी., दिल्ली में योजित ओ. ए. संख्या 291/2022 नरेश कुमार बनाम स्टेट ऑफ यू0पी0 के सम्बन्ध में।

महोदय,

कृपया उपरोक्त विषयक का सन्दर्भ ग्रहण करने का कष्ट करें। अवगत कराना है कि श्री नरेश कुमार पुत्र श्री गुलजारी लाल, ग्राम व पोस्ट असमौली, जनपद सम्भल द्वारा ग्राम असमौली, तहसील व जनपद सम्भल में स्थित मैसर्स डी.एस.एम. शुगर मिल की शुगर एवं आसवनी इकाइयों के विरुद्ध शिकायती पत्र (छायाप्रति संलग्न) मा0 राष्ट्रीय अधिकरण, नई दिल्ली के समक्ष प्रेषित किया गया है तथा प्रकरण पर मा0 अधिकरण में योजित ओ.ए. संख्या 291/2022 नरेश कुमार बनाम स्टेट आफ यू0पी0 एवं अन्य में विचाराधीन है। उद्योग का स्थलीय निरीक्षण कार्यालय द्वारा दिनांक 13.01.2023 को किया गया तथा निरीक्षण के दौरान शिकायतकर्ता के बारे में उपस्थित स्थानीय निवासियों से जानकारी प्राप्त करने का प्रयास किया गया, परन्तु उनके द्वारा अनभिज्ञता जाहिर की गयी एवं जानकारी प्राप्त नही हो सकी है। अग्रेतर अवगत कराना है कि मा0 दिल्ली उच्च न्यायालय, नई दिल्ली द्वारा W.P.(C)/10592/2022& CM APPL. 30644/2022 मैसर्स धामपुर बायो आगेनिक्स लि0 बनाम यूनियन आफ इण्डिया में कथित शिकायत की सत्यता की जाँच कर रिपोर्ट प्रस्तुत करने के आदेश दिनांक 07.12.2022 को पारित किये गये है।

अतः प्रकरण की महत्ता के दृष्टिगत आपसे अनुरोध है कि संदर्भित शिकायती पत्र में उल्लिखित शिकायतकर्ता के बारे में जानकारी उपलब्ध कराने का कष्ट करें, जिससे कि मा0 अधिकरण द्वारा पारित आदेशों के अनुपालन में अग्रिम आवश्यक कार्यवाही की जा सके।

भवदीय

(विकास मिश्र)
क्षेत्रीय अधिकारी

संलग्नकः यथोपरि।

प्रतिलिपि : जिलाधिकारी महोदय, सम्भल को सादर सूचनार्थ प्रेषित।

क्षेत्रीय अधिकारी

Annexure 19

Item No. 4 (Court No. 2)

BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI.

(Through Physical Hearing with Hybrid VC Option)

Original Application No. 291/2022

Naresh Kumar Applicant

Versus

State of U.P. & Ors. …Respondents

Date of hearing: 19.01.2023

CORAM: HON'BLE MR. JUSTICE ARUN KUMAR TYAGI, JUDICIAL MEMBER.
HON'BLE DR. AFROZ AHMAD, EXPERT MEMBER.

Applicant: None for the applicant.

Respondent: Mr. Pradeep Misra, Advocate for UPPCB (through VC).
Mr. Prakhar Pandey and Ms. Sukanya Singh, Advocates for M/s Dhampur Bio Organics Ltd.

Application is registered based on a letter petition received by Post

ORDER

1. The grievance made in the present letter petition sent by Mr. Naresh Kumar, which has been treated and registered as original application, is that DSM Sugar Mill in Village Asmoli, Tehsil and District Sambhal, Uttar Pradesh is discharging untreated effluent of its Distillery and Sugar Mill in the nearby drain during night. The highly polluted effluent travels 15 kilometers and joins river Sot which is a tributary of river Ganga. Discharge of untreated effluent is causing damage to crops and posing serious health hazards to local residents. Ground water of the adjoining villages has also been contaminated and drinking water of

hand pumps of about 10 adjoining villages is yellow in color having foul smell.

2. Vide order dated 29.04.2022, this Tribunal constituted a Joint Committee and directed the same to submit Factual and Action Taken Report within two months. The relevant part of the order reads as under:-

> *"X X X X*
> *In view of the serious allegations made in the present letter Petition, it would be appropriate to have a factual and action taken report from a Joint Committee comprising of CPCB, State PCB and District Magistrate, Moradabad. The State PCB will be the Nodal agency for coordination and compliance. The Joint Committee may meet within four weeks, undertake site visits, look into the grievances of the applicants and take requisite action by following due process of law. Factual and action taken report, providing status of compliance with CTO conditions and mode of disposal of effluents as well as status of ground water which is reported to be Yellow in color, may be furnished within two months by e-mail at judicial-ngt@gov.in preferably in the form of searchable PDF/OCR Support PDF and not in the form of Image PDF...."*

3. The Project Proponent- M/s Dhampur Bio Organics Ltd. filed **W.P. (C) No. 10592/2022 titled as M/s Dhampur Bio Organics Limited Vs. Union of India** against order dated 29.04.2022 before Hon'ble High Court of Delhi. Vide order dated 14.07.2022 passed by the Hon'ble High Court of Delhi in above-said Writ Petition, order dated 29.04.2022 passed by this Tribunal was stayed till the next date of listing i.e. 07.12.2022. The relevant part of the order reads as under:-

> *" Notice. Let the Union respondent file a reply on the writ petition within a period of eight weeks from today.*
>
> *Prima facie, the Court finds merit in the contention of Mr. Nigam, learned Senior Counsel appearing for the petitioner who contends that they were never placed on notice by the Tribunal upon receipt of the anonymous complaints. It is in that backdrop that Mr. Nigam, draws the attention of the Court to the principles laid down by the Supreme Court in Divine Retreat Centre vs. State of Kerala [(2008) 3 SCC 542] and the mandatory requirement as spelt out therein of the Tribunal following at least the rudimentary principles of natural justice.*

It was further pointed out that a reading of the impugned order would seem to suggest that the allegations made in the complaint appear to have been accepted and directions for an Action Taken Report being issued and compliances being enforced. That in the submission of learned senior counsel would essentially amount to the Tribunal having accepted the correctness of the allegations levelled ex parte the petitioner. Matter requires consideration.

Till the next date of listing, there shall be stay of the order dated 29 April 2022 passed by National Green Tribunal (Principal Bench). List again on 07.12.2022."

4. Stay of order dated 29.04.2022 has been extended by Hon'ble High Court of Delhi vide order dated 07.12.2022 till 09.05.2023 with direction to UPPCB to *"verify the genuineness of the said complaint, as also, the bona fides of the complainant, and file a report in respect of the same, by the next date of hearing"* . The relevant part of the order reads as under:-

"X X X X

2. The present petition has been filed by the Petitioner – M/s. Dhampur Bio Organics Limited challenging the impugned order dated 29th April, 2022 passed by the Principal Bench of the National Green Tribunal, New Delhi in Original Application No.291/2022. By the impugned order, various directions have been issued on the strength of a complaint filed by one Sh. Naresh Kumar.

3. Mr. Arvind Nigam, ld. Senior Counsel appearing for the Petitioner submits that the complainant in the present complaint was an anonymous/pseudonymous person, whose contact details are not even available with the Petitioner. The same are not even part of the record.

4. Mr. Ravi Prakash, ld. CGSC submits that the Respondent No.2 - Ministry of Legislative Affairs, Union of India, is not the correct Ministry to be impleaded in this matter, and the State Pollution Control Board ought to be impleaded instead.

5. Mr. Arvind Kumar, ld. Counsel appears for the U.P. Pollution Control Board. On an oral prayer the said Board is impleaded. Mr. Kumar is requested to accept notice.

6. Accordingly, let an amended memo of parties be filed by the Petitioner impleading the U.P. State Pollution Control Board, as Respondent No.2.

7. In the meantime, Mr. Ravi Prakash, ld. CGSC may merely obtain a copy of the alleged complaint received by the NGT, on the basis of which directions have been passed, and place the same on record, within four weeks. Copy of the said complaint

be also supplied to the ld. Counsels for the Petitioner, as also, ld. Counsel for the State Pollution Control Board.

8. Let the State Pollution Control Board verify the genuineness of the said complaint, as also, the bona fides of the complainant, and file a report in respect of the same, by the next date of hearing.

9. List on 9th May, 2023.

10. Interim order granted on 14th July, 2022 shall continue."

5. When the matter last came up for hearing in this Tribunal noticed the grounds of challenge to the order of this Tribunal, orders passed by Hon'ble High Court of Delhi, the fact that further proceedings before this Tribunal have not been stayed by Hon'ble High Court of Delhi by either of the orders dated 14.07.2022 and 07.12.2022 and directed UPPCB to file copy of its report regarding verification of genuineness of the complaint and credentials of the complainant by email at judicial-ngt@gov.in preferably in the form of searchable PDF/OCR Supported PDF and not in the form of Image PDF for proceeding further in the matter . The relevant part of order dated reads as under :-

"X X X X

5. From a perusal of orders dated14.07.2022 and 07.12.2022 passed by Hon'ble High Court of Delhi, it appears that order dated 29.04.2022 passed by this Tribunal has been challenged by the Project Proponent on the grounds of complaint made to this Tribunal being anonymous, tacit acceptance by this Tribunal of the averments made in the application as correct and the order having been passed without notice and giving opportunity of being heard to it.

6. It may be observed here that under the provisions of the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981, the Project Proponents are bound to comply with environmental clearance and Consent to Establish/Consent to Operate conditions and the State Pollution Control Boards/Committees are under obligation to periodically verify the same irrespective/independent of any complaint. Even this Tribunal is empowered to suo moto take cognizance of the cases involving questions relating to environment arising out of the implementation of enactments specified in Schedule I of the National Green Tribunal Act, 2010, as held in Municipal Corporation of Greater Mumbai V/s. Ankita Sinha and others 2021 SSC Online SC 897 and seek report from

the State Pollution Control Boards/Committees and reply from the Project Proponents regarding such compliance.

7. It may also be observed here that further proceedings before this Tribunal have not been stayed by Hon'ble High Court of Delhi by either of the orders dated 14.07.2022 and 07.12.2022. In these facts and circumstances of the case, we are of the view that further proceedings may be taken on the basis of factual position as may be verified by the UPPCB in compliance with order dated 07.12.2022 passed by Hon'ble O.A No. 291/2022 Naresh Kumar Vs. State of U.P. & Ors. Delhi High Court. The State PCB is directed to file copy of its report regarding verification of genuineness of the complaint and credentials of the complainant by email at judicial-ngt@gov.in preferably in the form of searchable PDF/OCR Supported PDF and not in the form of Image PDF.

8. In the course of hearing today while seeking adjournment, learned Counsel for the Project Proponent- M/s Dhampur Bio Organics Ltd. has also submitted that Civil Appeal No. 5975/2021 against order dated 01.09.2021 in O.A No. 539/2019 titled as Adil Ansari & Ors Vs. M/S Dhampur Sugar Mills Ltd. & Ors. is pending before the Hon'ble Supreme Court of India. The Registry is directed to place copies of the same on record as in the eventuality of the matter in issue in the present case being in issue in the above mentioned case, no further proceedings would be required to be taken in the present case.

9. List for further consideration on 19.01.2023."

6. In compliance thereof the UPPCB has filed Report dated 17.01.2023 vide email dated 17.01.2023 regarding status of the industry, status of the complaint and genuineness of the complaint. The relevant part of the report is reproduced below:-

*"**Inspection report of M/s Dhampur Bio Organics Ltd. formerly known as (DSM Sugars Unit, Asmoli, Dist. Sambhal) on 13.01.2023 in compliance to direction issued by Hon'ble NGT in O.A. No. 291/2022 Naresh Kumar Vs State of U.P. &Ors.***

X X X X

In compliance to the aforesaid directions, joint committee has scheduled the inspection on 14 July, 2022 the said unit. During visit representative of unit provided a copy of stay order issued by Hon'ble High court, Delhi against said order dated 29.04.2022 of Hon'ble NGT.

Hon'ble NGT vide order dated 9.11.2022 in above matter considered the order dated 14.07.2022 passed by Hon'ble high

court New Delhi in W.P.(C) No. 10592/2022 titled as M/s Dhampur Bio Organics Limited v/s Union of India , whereby order dated 29.04.2022 passed by Hon'ble NGT has been stayed. The operative part of order dated 9.11.2022 of Ho'ble NGT is as follows:

> *"….2. Vide order dated 29.04.2022, this Tribunal constituted a Joint Committee and directed the same to submit Factual and Action Taken Report within two months.*
> *3. Copy of order dated 14.07.2022 passed by the Hon'ble High Court of Delhi in W.P. (C) No. 10592/2022 titled as M/s Dhampur Bio Organics Limited Vs. Union of India has been filed by learned Counsel for the Project Proponent-M/s Dhampur Bio Organics Ltd. whereby Order dated 29.04.2022 passed by this Tribunal has been stayed by Hon'ble High Court of Delhi till the next date of listing i.e. 07.12.2022.*
> *5. The case is adjourned to 10.01.2023 for awaiting further orders from Hon'ble High Court of Delhi…..”*

Further, as per the direction of Hon'ble NGT dated 10.01.2023, the inspection of M/s Dhampur Bio Organics Ltd. formerly known as (DSM Sugars Unit, Asmoli, Dist. Sambhal) was carried out by officials of RO, UPPCB on 13.01.2023 and interacted with the officials of the unit.

The status of the industry, status of the complaint and genuineness of the complaint and the complainant is as follows:

<u>Status of the industry</u>

1- M/s Dhampur Bio Organics Ltd. (formerly known as M/s DSM Sugars Unit, Asmoli), Asmoli, DistrictSambhal (DistilleryUnit)-

i. The unit is engaged in production of Rectified Sprit/ENA/AbsoulteAlcohal having capacity 325 KLD (From B-Heavy Molasses) or 250 KLD (From C-Heavy Molasses) or 325 KLD (From Sugar Syrup) and power Co-generation of 8.5 MW unit. During inspection unit was found operational.
ii. The unit is having valid Consent to Operate under section 25/26 of the Water (Prevention and Control of Pollution) Act, 1974 and section 21/22 of the Air (Prevention and Control of Pollution) Act, 1981 and. Which are valid upto 31.12.2025. The copies are annexed as ***Annexure- 1.***
*iii. The unit is also having valid authorization under the provisions of Hazardous and other wastes (Management and Transboundary Movement) Rules, 2016 for storage and disposal Hazardous wastes which is valid upto 02.06.2026. The copy is Annexed as****Annexure- 2.***

iv. The unit has obtained NOC from U.P. Ground Water Department for the abstraction of ground water which is valid upto 28.06.2026. The copy is annexed as ***Annexure- 3.***

v. In unit approx 2110 m^3/Day spent wash is generated from the distillation process. The unit has installed Multi effect Evaporator (04 stage) capacity 1265 m^3/Day, (06 stage) capacity 1400 m^3/Day, Condensate polishing unit capacity 4500 m^3/Day, for treatment of spent wash. After concentration of spent wash/ Slop, it is used as fuel mixed with baggess in slop boiler.

vi. The unit has installed 02 nos of Slop boiler having capacity 35 TPH and 45 TPH. The bag filter is attached as APCS with 35 TPH boiler, the stack height is 70 meter from ground level. The boiler of 35 TPH is attached with Bag Filter followed by 70 meter high Stack, boilers of 45 TPH. The bag filter is attached as APCS with 35 TPH boiler, the stack height is 70 meter from ground level. During inspection APCS were found in operation and Stack monitoring was carried out. As per stack monitoring report SPM were found 46.66 mg/Nm^3 and 43.05 mg/Nm^3. As per stack monitoring report SPM was found within prescribes norms. The copies are annexed as ***Annexure- 4.***

vii. The unit is registered member of M/s Bharat Oil & Waste Management Ltd., Kanpur for the safe disposal of hazardous wastes.

viii. The unit has installed a Lagoon of 4500 KL capacity for storage of concentrated spent wash for 07 days storage.

ix. The unit has installed mass flow meters at the inlet and outlet of MEE and web cameras installed at final outlet.

x. The unit is based on Zero Liquid Discharge (ZLD) for the treatment of spent wash. During inspection unit was maintaining ZLD process and no effluent was being discharged from outside the premises.

xi. House keeping of industry was not found proper.

2- ***M/s Dhampur Bio Organics Ltd. (formerly known as M/s DSM Sugars Unit, Asmoli), Asmoli, DistrictSambhal (Sugar Unit)****-*

i. The unit is a sugar mill having installed capacity of 9000 TCD and power Co-generation of 40 MW unit. The crushing for the year 2022-23 was started on 01.11.2022. During inspection unit was found in operation.

ii. The unit is having valid Consent to Operate under section 25/26 of the Water (Prevention and Control of Pollution) Act, 1974 and section 21/22 of the Air (Prevention and Control of Pollution) Act, 1981, which are valid upto 31.12.2023. The copies are annexed as ***Annexure- 5&6.***

iii. The unit is also having valid authorization under the provisions of Hazardous and other wastes (Management and Transboundary Movement) Rules, 2016 for storage and disposal Hazardous wastes which is valid upto 27.12.2027. The copy is Annexed ***asAnnexure- 7.***

iv. The unit has obtained NOC from U.P. Ground Water Department for the abstraction of ground water which is valid upto 28.06.2026. The copy is annexed as ***Annexure- 8.***

v. The unit is registered member of TSDF M/s Bharat Oil & Waste Management Ltd., Kanpur for the safe disposal of hazardous wastes.

vi. The unit has 03 nos of boiler having capacity 170 TPH, 70 TPH and 50 TPH. The boiler of 170 TPH is attached with (APCS) Electrostatic Precipitator (ESP) followed by 70 meter high Stack. Boilers 70 TPH & 50 TPH are attached to (APCS) as wet scrubber and multi cyclone respectably followed by common stack of 60 meter. During inspection APCS were found in operation. During, visit stack monitoring were carried out. As per stack monitoring report SPM were found 105.64 mg/Nm3 and 130.27 mg/Nm3. Which are within prescribed norms. The copy is annexed as ***Annexure - 9.***

vii. The unit has provided OCEMS for continuous monitoring of emission parameters and found connected with CPCB server.

viii. Housekeeping of industry was not found proper.

ix. Water sprinkling was not found adequate in Bagasse yard.

x. The unit has installed ETP of capacity of 2500 KLD for the treatment of effluent from mill house, Boiling House, Cooling Tower &Spray pond over flow Etc. The ETP consists of Screen Chamber, Oil & Grease Traps, Equalization Tank, Primary Clarifier, Aeration Tank 1 & 2, Secondary Clarifier, Treated water Tank, Multi Grade Filter, Activated Carbon Filter, Sludge Drying Beds followed by CPU. The unit has provided Spray Pond over Flow treatment system consist of Holding Tank, Lime Mixing and Reaction Tank, Lamella Clarifier. During inspection ETP was found in operation and sample were collected from inlet of ETP, outlet of ETP, Storage Lagoon, Final outlet of unit. As per analysis report, the Parameter of treated effluent are within prescribed norms. The Copy is annexed as ***Annexure 10.***

xi. The unit has provided OCEMS at the outlet of ETP for continuous monitoring of treated effluent parameters and found connected with CPCB server.

xii. Finally effluent was found collected in lagoon and was used for the irrigation purposes in the nearby agriculture field. The capacity of lagoon is 16000 M^3 which is less than 15 days of holding capacity of treated effluent storage.

xiii. The unit has installed STP having capacity 60 KLD for treatment of sewerage generated from residential colony. The STP consist of collection Tank, Bar Screen Chamber, Oil & Grease Trap, Equalization Tank, FABR Tank, Tube Settler, Filter feed Tank, Multi Grade Filter, Activated Carbon Filter, Treated water Tank. During inspection STP was found in operation and sample was collected from outlet of STP. As per analysis report the parameters of treated effluent was found with in prescribed norms. The copy is annexed as ***Annexure - 11.***

xiv. The treated effluent from the industry is discharged in to the Sot river after a distance of approx 1.0 Km through drain/

covered hume pipe. Nearby farmers are taking the treated water for irrigation purpose from same drain. A sample of treated effluent from outlet of the unit meeting to Sot river near Shamshan Ghat was collected. As per analysis report parameter were found within prescribed norms. The copy is annexed as ***Annexure- 12.***

xv. During inspection Sot River was surveyed. It was observed that Sot River was found dry at upstream of the unit. There is no natural source of water in Sot river and therefore there is no flow of water in the upstream of unit.

xvi. After the discharge point of effluent in Sot river, Sot river was further surveyed. It was found thatat Village Firozpur (Moradabad- Sambhal road bridge which is located at distance of 10-12 KM away from the unit) Sot river was found dry. Before such drying of Sot river, a small ponding was observed and sample was collected. As per analysis report parameter were found within prescribed norms. The copy is annexed as ***Annexure- 13.***

xvii. Ground water sample from unit premises were collected. As per analysis report parameter were found within prescribed norms. The copy is annexed as ***Annexure- 14.***

As illustrated above the details of several sampling points and results found in there analysis report is as tabulated below -

(A) - Effluent Samples

Sr. no.	*Name of the sampling point*	*Results*				
		pH	*BOD (mg/l)*	*COD (mg/l)*	*TSS (mg/l)*	*TDS (mg/l)*
	Standards	*5.5 - 8.5*	*30*	*250*	*30*	*2100*
1	*Outlet of ETP*	*7.79*	*18*	*136*	*25*	*580*
2	*Storage Lagoon*	*7.21*	*16*	*128*	*22*	*590*
3	*Outlet of STP*	*8.25*	*9*	*88*	*8*	*320*
4	*Outlet of factory*	*7.56*	*20*	*160*	*27*	*570*
5	*Sot river (Near Shamshan Ghat, Asmoli)*	*7.63*	*16*	*144*	*-*	*280*
6	*Sot river (Vill firozpur, Sambhal.*	*8.17*	*9*	*104*	*-*	*760*

B)- Stack Monitoring

Sr. no.	*Details of Boiler*	*Parameters*	
		Results PM (mg/Nm^3)	*Standards PM (mg/Nm^3)*
1	*170 TPH*	*105.64*	*150*
2	*70 TPH, 50 TPH*	*130.27*	*150*
3	*45 TPH (Slop Boiler)*	*43.05*	*50*
4	*35 TPH (Slop Boiler)*	*46.66*	*50*

About the genuineness of the complaint and the complainant

The complainant Mr. Naresh Kumar S/o Gulzari Lal resident of village- Asmoli, District- Sambhal, could not be located in the village- Asmoli, District- Sambhal, which was also confirmed by Gram Pradhan of village Asmoli Smt. Dolly W/O Shri Mahaveer Singh when contacted, she was also unaware about the said complainant. Gram Pradhan of village Asmoli Smt. Dolly W/O Shri Mahaveer Singh has given a written letter dated 15-01-2023 stating that Mr. Naresh Kumar s/o Gulzari Lal is not resident of village-Asmoli, District- Sambhal (Copy attached as ***Annexure- 15).*** *In the same context a letter was sent by Regional Officer, U.P. Pollution Control Board, Moradabad to Circle Officer Police, Asmoli, District Sambhal to get the details of the said complainant Mr. Naresh Kumar S/o Gulzari Lal resident of village- Asmoli, District- Sambhal. Circle Officer Police, Asmoli, District Sambhal vide its letter dated 16-01-2023 has informed that complainant Mr. Naresh Kumar S/o Gulzari Lal is not residing in village Asmoli, District Sambhal. Copy annexed as* ***Annexure- 16.***

Status report on the issues raised in the complaint

In the complaint made by Mr. Naresh Kumar S/o Gulzari Lal, village- Asmoli, District- Sambhal, it has been complained that the industry is discharging its polluted water via hume pipe line in drain which is finally connected to river Sot. The complainant further states that industry discharges its effluent in the night due to such discharge of effluent, crop gets burn and people are also suffering from various diseases. In this context following facts are submitted :

- *District Horticulture Officer, Sambhal vide its letter dated 29.12.2021 has informed that any adverse effect on the crops was not observed due to M/s Dhampur Bio Organics Ltd. Copy annexed as* ***Annexure - 17.***
- *Office of the Executive Engineer, Block Office, U.P. Jal Nigam (Rural), Moradabad vide its letter dated 29.08.2022 has provided the ground water analysis report of several places nearby of the Dhampur Bio Organics Ltd. In such report, out of eight water samples collected, parameters of six samples are found within the norms and only parameters of turbidity of two samples are found to be 8.91 and 8.17 (against the normal range of 1-5).Copy annexed as* ***Annexure - 18.***
- *UPPCB during inspection dated 13.01.2023 collected ground water sample from the handpump in front of M/s Dhampur Bio Organics limited in which the ground water quality is found within the prescribed limits for drinking water. Copy of sample results is annexed as* ***Annuxre-19****.*
- *UPPCB during inspection dated 13.01.2023 collected ground water sample from the borewell near residential colony of M/s Dhampur Bio Organics limited in which the ground water quality is found within the prescribed limits for drinking water. Copy of sample results is annexed as* ***Annuxre-20****.*

- *UPPCB vide letter dated 13.01.2023 has sent a letter to Chief Medical Officer District Sambhal to send report on the health of local people of the nearby area of the industry. Reply of CMO is awaited. Copy of letter dated 13.01.2023 is annexed as* ***Annuxre-21"***

7. The Registry has placed on record copies of orders dated 08.10.2021, 04.03.2022, 19.04.2022, 29.07.2022, 14.10.2022 and 04.11.2022 passed by Hon'ble Supreme Court in **Civil Appeal No. 5975/2021 titled as M/S Dhampur Sugar Mills Ltd. and others Vs. Adil Ansari and others** filed against order dated 01.09.2021 passed by the Principal Bench of this Tribunal in **O.A No. 539/2019 titled as Adil Ansari and others Vs. M/S Dhampur Sugar Mills Ltd. and others.**

8. Vide order dated 01.09.2021 passed in **O.A No. 539/2019 titled as Adil Ansari and others Vs. M/S Dhampur Sugar Mills Ltd. and others** all the four units namel (i) M/s Dhampur Sugar Mills Ltd., District Sambhal, (ii) M/s Dhampur Sugar Mills Ltd., District Bijnor, (iii) M/s Dhampur Distillery Unit, District Bijnor and (iv) M/s Dhampur Sugar Mills Ltd., Meerganj, District Bareilly were directed to pay environmental compensation of Rs. 5 Crores (Rupees Five Crores) each and respondents no. 1 to 3 were directed to pay litigation cost of Rs. 10 lacs to CPCB. Directions were also issued to the statutory authorities inter alia for carrying out regular inspections in both halves of the crushing season and also at least once in non-crushing season.

9. Hon'ble Supreme Court vide order dated 08.10.2021 passed in Civil Appeal No. 5975/2021 stayed impugned order dated 01.09.2021 restricted to the direction for payment of compensation in respect of each unit and costs imposed on respondents No.1 to 3. The relevant part of order dated 08.10.2021 reads as under:-

"Issue notice, returnable in six weeks.

In the meanwhile there will be a stay of the order impugned to restricted to the direction for payment of compensation of Rs.5,00,00,000/- (Rupees five crores only) in respect of each unit and to the costs of Rs.10,00,000/- imposed on the Respondent Nos. 1 to 3.
A committee may be constituted to make a detailed study as directed by the order impugned, but no further steps shall be taken by the Committee for a period of six weeks from date."

10. Interim order has been extended during pendency of the appeal which is as per the information on the website of Hon'ble Supreme Court still pending for decision.

11. In view of the report submitted by the UPPCB regarding the genuineness of the complaint and bonafides of the complainant and also pendency of civil appeal in the Hon'ble Supreme Court, we are of the considered view that no further action is required to be taken on the present application which is disposed of accordingly.

Arun Kumar Tyagi, JM

Dr. Afroz Ahmad, EM

January 19, 2023
AG