

Date: 30.11.2024

**To,**

**The Director**  
**Ministry of Environment, Forest & Climate Change**  
**Kendriya Bhawan, 5<sup>th</sup> Floor, Sector "H" Aliganj**  
**Lucknow (Uttar Pradesh)**

**Subject:** Six Monthly Compliance Report of Environmental Clearance for expansion of existing Sugar unit from 5000 TCD to 11000 TCD along with 43.5 MW Co gen power by M/s **Dhampur Bio-organics Limited, Unit: Meerganj, Division: Sugar**, at Village: Nagari Sadat, Block & Tehsil: Meerganj District: Bareilly (Uttar Pradesh) - 243504 for the period of April, 2024 to September-2024.

**EC Identification No. EC23B025UP120189, dated March 27<sup>th</sup>, 2023**

**Reg:** Submission of Six-Monthly Compliance Report for Period of April, 2024 to September-2024.

Dear Sir,

This is in connection to above mentioned subject we are hereby submitting the six monthly compliance report of the conditions of Environmental Clearance for expansion of existing Sugar unit from 5000 TCD to 11000 TCD along with 43.5 MW Co gen power by M/s **Dhampur Bio-organics Limited, Unit: Meerganj, Division: Sugar**, at Village: Nagari Sadat, Block & Tehsil: Meerganj District: Bareilly (Uttar Pradesh) - 243504 for the period of April, 2024 to September-2024. along with annexures as follows:

1. **Annexure-01:** Copy of CTO (Air and Water),
2. **Annexure-02:** Copy of Environmental Clearance
3. **Annexure-03:** Test Report
4. **Annexure-04:** Copy of published information

Requesting you to accept the hard and soft copy reports submitted for information please.

Thanking You,

Your's sincerely

**M/s Dhampur Bio-organics Limited**  
**Unit: Meerganj, Division: Sugar**

Authorized Signatory

**SIX-MONTHLY ENVIRONMENTAL COMPLIANCE  
REPORT OF STIPULATED CONDITIONS OF  
ENVIRONMENTAL CLEARANCE**

**(April, 2024 to September, 2024)**

**For**

**PROPOSED EXPANSION OF EXISTING SUGAR UNIT FROM  
5000 TCD TO 11000 TCD ALONG WITH 43.5 MW CO GEN  
POWER**

**By**

**M/s Dhampur Bio-organics Limited  
Unit: Meerganj, Division: Sugar**

**At**

**Village: Nagari Sadat, Block & Tehsil: Meerganj  
District: Bareilly (Uttar Pradesh) - 243504**

**For Submission to:**

**Ministry of Environment, Forest & Climate Change  
(Regional Office, Lucknow)**

**Submitted By:**

**M/s Dhampur Bio-organics Limited  
Unit: Meerganj, Division: Sugar**

**TABLE OF CONTENT**

| <b>Sr. No</b>   | <b>Title</b>   | <b>Page No.</b> |
|---|--|-----------------|
| <b>CHAPTER No. 01: INTRODUCTION AND PROJECT DESCRIPTION</b>                           |  | <b>04</b>       |
| <b>CHAPTER No. 02: COMPLIANCE OF STIPULATED CONDITIONS OF ENVIRONMENTAL CLEARANCE</b> |  | <b>05 - 13</b>  |
| <b>CHAPTER No. 03: DETAILS OF ENVIRONMENTAL MONITORING</b>                            |  | <b>14 - 29</b>  |
| <b>3.1</b>  | <b>AMBIENT AIR QUALITY MONITORING</b>                            | <b>14</b>       |
| <b>3.1.1</b>  | Ambient air Quality Monitoring Stations                          | 14              |
| <b>3.1.2</b>  | Ambient Air Quality Monitoring Methodology                       | 14              |
| <b>3.1.3</b>  | Ambient Air Quality Monitoring Results Near Main Gate            | 15              |
| <b>3.1.4</b>  | Ambient Air Quality Monitoring Results at Village: Nagaria Sadat | 15              |
| <b>3.1.5</b>  | Ambient Air Quality Monitoring Results at Village: Jatan         | 16              |
| <b>3.1.6</b>  | Ambient Air Quality Monitoring Results at Village: Sindhauli     | 16              |
| <b>3.1.7</b>  | Discussion on Ambient Air Quality in the Study Area              | 17              |
| <b>3.2</b>  | <b>AMBIENT NOISE MONITORING</b>                                  | <b>18</b>       |
| <b>3.2.1</b>  | Ambient Noise Monitoring Locations                               | 18              |
| <b>3.2.2</b>  | Methodology of Noise Monitoring                                  | 19              |
| <b>3.2.3</b>  | Ambient Noise Monitoring Results                                 | 19              |
| <b>3.2.4</b>  | Discussion on Ambient Noise Levels in the Study Area             | 20              |
| <b>3.3</b>  | <b>GROUND WATER QUALITY MONITORING</b>                           | <b>20</b>       |
| <b>3.3.1</b>  | Ground water Quality Monitoring Locations                        | 20              |
| <b>3.3.2</b>  | Methodology of ground water Quality Monitoring                   | 20              |
| <b>3.3.3</b>  | Ground water Quality Monitoring Results                          | 21              |
| <b>3.4</b>  | <b>SOIL MONITORING</b>   | <b>28</b>       |
| <b>3.4.1</b>  | Soil Monitoring Locations  | 28              |
| <b>3.4.2</b>  | Methodology of Soil Monitoring                                   | 28              |
| <b>3.4.3</b>  | Soil Monitoring Results  | 28              |
| <b>3.4.4</b>  | Discussion on Soil Characteristics in the Study Area             | 29              |

| <b>Sr. No.</b> | <b>List of Table</b>  | <b>Page No.</b> |
|----------------|---|-----------------|
| 1.             | <b>Table-3.1:</b> Details of Ambient Air Quality Monitoring Stations                | 14              |
| 2.             | <b>Table-3.2:</b> Techniques used for Ambient Air Quality Monitoring                | 15              |
| 3.             | <b>Table-3.3:</b> Ambient Air Quality Monitoring Results Near Main Gate             | 15              |
| 4.             | <b>Table-3.4:</b> Ambient Air Quality Monitoring Results at Village: Nagaria Sadat  | 16              |
| 5.             | <b>Table-3.5:</b> Ambient Air Quality Monitoring Results at Village: Jatan          | 16              |
| 6.             | <b>Table-3.6:</b> Ambient Air Quality Monitoring Results at Village: Sindhaul       | 16              |
| 7.             | <b>Table-3.7:</b> Details of Stack Emission Monitoring Result                       | 19              |
| 8.             | <b>Table-3.8:</b> Details of Ambient Noise Monitoring Stations                      | 19              |
| 9.             | <b>Table-3.9:</b> Ambient Noise Monitoring Results                                  | 19              |
| 10.            | <b>Table-3.10:</b> Noise Standards as per CPCB Schedule rule 3(1) and 4(1)          | 19              |
| 11.            | <b>Table-3.11:</b> Details of Water Quality Monitoring Station                      | 20              |
| 12.            | <b>Table-3.12:</b> Ground water Quality Results at Borewell Water (April, 2024)     | 22              |
| 13.            | <b>Table-3.13:</b> Ground water Quality Results at Borewell Water (May, 2024)       | 23              |
| 14.            | <b>Table-3.14:</b> Ground water Quality Results at Borewell Water (June, 2024)      | 24              |
| 15.            | <b>Table-3.15:</b> Ground water Quality Results at Borewell Water (July, 2024)      | 25              |
| 16.            | <b>Table-3.16:</b> Ground water Quality Results at Borewell Water (August, 2024)    | 26              |
| 17.            | <b>Table-3.17:</b> Ground water Quality Results at Borewell Water (September, 2024) | 27              |
| 15.            | <b>Table-3.18:</b> Details of Soil Monitoring Stations                              | 28              |
| 16.            | <b>Table-3.19:</b> Physico-Chemical Characteristics of Soil at Plant Premises       | 29              |

| <b>Sr. No.</b> | <b>List of Figures</b>   | <b>Page No.</b> |
|----------------|--|-----------------|
| 1.             | <b>Figure-3.1:</b> Graphs Showing PM <sub>10</sub> Concentration at all sites  | 17              |
| 2.             | <b>Figure-3.2:</b> Graphs Showing PM <sub>2.5</sub> Concentration at all sites | 17              |
| 3.             | <b>Figure-3.3:</b> Graphs Showing SO <sub>2</sub> Concentration at all sites   | 18              |
| 4.             | <b>Figure-3.4:</b> Graphs Showing NO <sub>x</sub> Concentration at all sites   | 18              |
| 5.             | <b>Figure-3.5:</b> Day and Night Time noise Level at Near Plant Premises       | 19              |

## **CHAPTER No. 01: INTRODUCTION AND PROJECT DESCRIPTION**

Six monthly environmental compliance/status report is submitted for Proposed expansion of existing Sugar unit from 5000 TCD to 11000 TCD along with 43.5 MW Co gen power by **M/s Dhampur Bio-organics Limited, Unit: Meerganj, Division: Sugar** for the period of April, 2024 to September, 2024. The Project is located at Village: Nagari Sadat, Block & Tehsil: Meerganj District: Bareilly (Uttar Pradesh) - 243504. Prior Environment Clearance was obtained from State Level Environment Impact Assessment Authority, Uttar Pradesh wide EC Identification No. **EC23B025UP120189**, dated **March 27<sup>th</sup>, 2023**. Consolidated Consent & Authorization obtained for the project Vide Ref No.- **185964/UPPCB/Bareilly(UPPCBRO)/CTO/both/BAREILLY/2023**, dated **19/06/2023** for validity upto 31/12/2024. Copy of CTO is attached here as **Annexure-1**. Unit is currently operating at 9000 TCD.

Environmental mitigation measures described in Environmental Management Plan are being implemented during operation phase. **M/s Dhampur Bio-organics Limited, Unit: Meerganj, Division: Sugar** management team is fully conscious about Environmental Management and enhancing green belt development in project surrounding area.

Six monthly compliance/status reports for **April, 2024 to September, 2024** for conditions stipulated in the Environmental Clearance letter issued by SEIAA, UP are enclosed as **Annexure-2**. Photographs view of implemented mitigation measures are also attached for the ready reference as Photo Documentation.

## **CHAPTER No. 02: COMPLIANCE OF STIPULATED CONDITIONS OF ENVIRONMENTAL CLEARANCE**

**Name of the Project:** Proposed expansion of existing Sugar unit from 5000 TCD to 11000 TCD along with 43.5 MW Co gen power at Village: Nagari Sadat, Block & Tehsil: Meerganj District: Bareilly (Uttar Pradesh) - 243504. by M/s Dhampur Bio-organics Limited, Unit: Meerganj, Division: Sugar.

**EC Identification No. EC23B025UP120189, dated March 27<sup>th</sup>, 2023.**

**Period of Compliance Report:** (October, 2023 to March, 2024)

| <b>Sr. No.</b>             | <b>Condition</b>  | <b>Reply</b>  |
|----------------------------|---|---|
| <b>SPECIFIC CONDITION:</b> |   |   |
| i.                         | Notification dated 14.01.2016 of MoEF&CC regarding discharge of treated effluent shall be complied with.  | Point is noted and same is being complied. Discharge of treated waste water is being discharged as per MoEF&CC Guidelines.  |
| ii.                        | Directions/suggestions given during public hearing and commitment made by the project proponent should be strictly complied.  | Complied  |
| iii.                       | Ash generated will be stored in dedicated areas with proper fencing.  | Fly ash generated is being provided to brick manufacturer.  |
| iv.                        | The project proponent will install 3 CAAQMS in consultation with UPPCB.   | PP has established 3 air quality monitoring stations after consultation with UPPCB. Regular Ambient Air Quality monitoring is being done by NABL accredited 3 <sup>rd</sup> party Laboratory. |
| v.                         | 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). | Green belt has been already developed within premises. Appox 33 % area has been developed as green belt and it shall be maintained.   |
| vi.                        | 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.   | Point is noted and complied.  |
| vii.                       | Greening and paving shall be implemented in the plant area to arrest soil erosion and dust pollution exposed soil surface.  | Condition noted and complied  |

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| <b>viii.</b> | Properly covered vehicles shall be used while transporting material and product.   | Covered trucks are being utilised in transportation of Bagasse and Fly ash. |
| <b>ix.</b>   | Allergy test should also be included in health checkup of works.   | Health check-up of employee has been done on regular basis.                 |
| <b>x.</b>    | Industry should comply with the CPCB charter guidelines for sugar units and treated water shall be used for the different purposes as per the requirement in industry. | Condition noted and complied.   |

**STANDARD ENVIRONMENTAL CLEARANCE CONDITIONS:**

| <b>I</b> | <b>Statutory Compliance</b>  |  |
|----------|--|--|
| i        | The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1986, in case of the diversion of forest land for non-forest purpose involved in the project.   | Not applicable as there is no forest land involved in existing project and no forest is situated within 10 km radius.  |
| ii       | The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.  | Not applicable.  |
| iii      | The project proponent shall prepare a Site-Specific Conservation Plan & Wildlife Management Plan and approved by the Chief Wildlife Warden. The recommendations of the approved Site-Specific Conservation Plan/ Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report. (In case of the presence of schedule-I species in the study area). | No schedule-I species is found in study area, hence this condition is not applicable.  |
| iv       | The project proponent shall obtain Consent to Establish/ Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State Pollution Control Board/ Committee.  | The unit has obtained Consent to Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the water (Prevention & Control of Pollution) Act, 1974 from Uttar Pradesh Pollution Control Board for existing capacity. <b>Copy of CTO (Air &amp; water) is enclosed as Annexure-1.</b> |
| v        | The project proponent shall obtain authorization under the Hazardous and other Waste Management Rules, 2016 as amended from time to time.  | Hazardous waste generated is being disposed as per the Hazardous Waste Management Rules 2016.<br><b>Copy of Hazardous Waste Authorisation as Annexure-1.</b>   |
| vi       | The company shall strictly comply with the rules and guidelines under Manufacture, Storage and import of   | Point is noted and same shall be implemented as per rules and  |

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|           | Hazardous Chemicals (MSIHC) Rules, 1989 as amended time to time. All transportation of Hazardous Chemicals shall be as per the Motor Vehicle Act (MVA), 1989.   | guidelines under Manufacture, Storage and import of Hazardous Chemicals (MSIHC) Rules, 1989 as amended time to time.  |
| <b>II</b> | <b>Air Quality Monitoring and Preservation:</b>   |   |
| i         | The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission with respect to standards prescribed in Environment (Protection) Rules 1986 and connect to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.  | Unit has installed 24 x 7 continuous emission monitoring system at process stacks.  |
| ii        | The project proponent shall install system carryout to Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM <sub>10</sub> and PM <sub>2.5</sub> in reference to PM emission, and SO <sub>2</sub> and NO <sub>x</sub> in reference to SO <sub>2</sub> and NO <sub>x</sub> emissions) within and outside the plant area at least at four locations (one within and three outside the plant area at an angle of 120° each), covering upwind and downwind directions. | Point is noted and Four locations for ambient air quality monitoring has been identified. Monitoring has been done at identified sites.<br><b>Monitoring report enclosed as Annexure-3.</b> |
| iii       | The project proponent shall submit monthly summary report of continuous stack emission and air quality monitoring and results of manual stack monitoring and manual monitoring of air quality /fugitive emissions to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six monthly monitoring report.   | Stack monitoring has been done by third party monitoring at the time of industry operation.   |
| iv        | Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.   | Both the boilers (80 TPH & 50 TPH) are equipped with individual wet scrubber and common stack height of 50 meter from ground level.   |
| v         | The National Ambient Air Quality Emission Standard issued by the Ministry vide G.S.R No. 826(E) dated 16 <sup>th</sup> November, 2009 shall be complied with.   | Ambient air quality monitoring has been done at four locations. <b>Test report enclosed as Annexure-3.</b>  |
| vi        | Sulphur content should not exceed 0.5% in the coal for use in coal fired boilers to control particulate emissions within permissible limits (as applicable). The gaseous emissions shall be dispersed through   | Point is noted and only Bagasse is being used as fuel in Boiler. In Bagasse, sulphur level is negligible in fuel.   |

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|            | stack of adequate height as per CPCB/ SPCB guidelines.  |   |
| vii        | The D.G. sets shall be equipped with suitable pollution control devices and the adequate stack height so that the emissions are in conformity with the extant regulations and the guidelines in this regards.   | Point is noted and complied.  |
| viii       | Storage of raw materials, coal etc shall be either stored in silos or in covered areas to prevent dust pollution and their other fugitive emissions.  | This is Sugar Cane Crushing unit. Bagasse yard already provided which is adequate at expanded capacity also.  |
| <b>III</b> | <b>Water Quality Monitoring and Preservation</b>  |   |
| i          | 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 (applicable in case of the projects achieving ZLD) and connected to SPCB and CPCB online servers.   | Continuous online monitoring system has been installed and connected to CPCB online server.   |
| ii         | Zero Liquid Discharge shall be ensured and no waste/treated water shall be discharged outside the premises.   | This is sugar unit; surplus treated water has been discharge as per the consent condition.  |
| iii        | Process effluent / any wastewater shall not be allowed to mix with storm water. The storm water from the premises shall be collected and discharged through a separate conveyance system.   | Separate storm water drain has been provided. Storm water from the premises shall be collected and discharged.  |
| iv         | The effluent discharge shall conform to the standards prescribed under the Environment (Protection) Rules, 1986, or as specified by the State Pollution Control Board while granting Consent under the Air/ Water Act, whichever is more stringent.   | Point is noted and same is being complied. Generation of waste water and discharge of treated waste water is being discharged as per UPPCB and CPCB norms.  |
| v          | Total fresh water requirement shall not exceed the proposed quantity or as specified by the Committee. Prior permission shall be obtained from the concerned regulatory authority/ CGWA in this regard.   | After expansion fresh water requirement has been 1760 KLD and same is being abstracted.   |
| vi         | Industrial/trade effluent shall be segregated into High COD/TDS and Low COD/TDS effluent streams. High TDS/COD shall be passed through stripper followed by MEE and ATFD (agitated thin film drier). Low TDS effluent stream shall be treated in ETP and treated effluent shall conform to the standards prescribed under the Environment (Protection) Rules, 1986 and treated water from ETP shall be used for irrigation. | This is sugar unit therefore; wastewater generated is being treated in ETP, which comprises of Bar Screen, Oil & Grease trap, chemical Mixing, Equalization, Primary Clarifier, Aeration, Secondary Clarifier, MGF, ACF, Decanter and Sludge Drying beds. |

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| vii.  | The company shall harvest rain water from the roof tops of the buildings and storm water drain to recharge the ground water and utilize the same for different industrial operations within the plant.                     | Industry already constructed rain water harvesting pit within premises for rain water harvesting. Industry also adopted village pond to ensure artificial recharge of rain water.                      |
| <b>IV Noise Monitoring and Preservation</b> |  |  |
| i   | Acoustic enclosure shall be provided to D.G. set for controlling the noise pollution.  | Acoustic enclosure is provided with DG set for controlling the noise pollution.  |
| ii  | The overall noise levels in and around the plant area shall be kept well within the standards by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. | Acoustic enclosure and silencer has been provided for plant and machinery to reduce noise level. Ambient Noise Monitoring has been done at three locations. <b>Test report enclosed as Annexure-3.</b> |
| iii   | The amount noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time.   | Noise monitoring has been done at three locations and <b>Test report enclosed as Annexure-3.</b>   |
| <b>V Energy Conservation Measures</b>       |  |  |
| i   | The energy sources for lighting purpose shall preferably by LED based.   | The unit will have preferred LED Lighting in the campus for proposed expansion.  |
| <b>VI Waste Management</b>                  |  |  |
| i   | Hazardous chemicals shall be stored in tanks, tanks farms, drums, carboys etc. Flame arresters shall be provided on tank farm and the solvent transfer through pumps.  | Hazardous chemical is being / shall be stored as per rules and guidelines under Manufacture, Storage and import of Hazardous Chemicals (MSIHC) Rules, 1989 as amended time to time.                    |
| ii  | Process organic residue and spent carbon, if any shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt shall be disposed off to the TSDF.   | No Process organic residue and spent carbon are generated. ETP sludge is being provided to farmer which is being utilised as manure. Fly ash generated is being provided to brick manufacturer.        |
| iii   | The company shall undertake waste minimization measures wherever feasible as below:  | -  |
| a.  | Metering and control of quantities of active ingredients to minimize waste.  | The unit has metered all necessary flow points as per CPCB / UPPCB guidelines.   |

|             |   |   |  |
|-------------|---|---|--|
|             | b.  | Reuse of by-products from the process as raw materials or as raw material substitutes in other processes. | Treated water from ETP is being utilised in Process. |
|             | c.  | Use of automated filling to minimize spillage.  | Condition noted and complied.                        |
|             | d.  | Use of Close Feed system into batch reactors.   | Not applicable.                                      |
|             | e.  | Venting equipment through vapour recovery system.   | Not applicable.                                      |
|             | f.  | Use of high-pressure hoses for equipment clearing to reduce wastewater generation.                        | Not applicable.                                      |
| <b>VII</b>  | <b>Green Belt</b>   |   |  |
| i.          | Green belt shall be developed in an area equal to 33% of the plant area with a native tree species in accordance with CPCB guidelines. The greenbelt shall inter alia cover the entire periphery of the plant.  |   |  |
| <b>VIII</b> | <b>Safety, Public Hearing and Human Health Issues</b>   |   |  |
| i           | Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.  |   |  |
| ii          | The PP shall provide Personal Protection Equipment (PPE) as per the norms of Factory Act.   |   |  |
| iii         | Training shall be imparted to all employees on safety and health aspects of chemicals handling. Pre-employment and routine periodical medical examinations for all employees shall be undertaken on regular basis. Training to all employees on handling of chemicals shall be imparted.  |   |  |
| iv          | Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, creche etc. The housing may be in the form of temporary structures to be removed after the completion of the project. |   |  |
| v           | Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.   |   |  |
| vi          | 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.   |   |  |

| <b>IX</b> | <b>Corporate Environmental Responsibility</b>   |   |
|-----------|---|---|
| i         | The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 1 <sup>st</sup> May 2018, as applicable, regarding Corporate Environment Responsibility.  | Point is noted and complied.  |
| ii        | The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/ deviation/ violation of the environmental/ forest/ wildlife norms/ conditions. The company shall have defined system of reporting infringements/ deviation/ violation of the environmental/ forest/ wildlife norms/ conditions and/ or shareholders/ stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report. | The company is having an environmental policy duly approved by the Board of Directors.  |
| iii       | A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.  | The unit has organized an Environmental Cell to take care of all concerning stipulated conditions regarding environment.                  |
| iv        | Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/ Regional Office along with the Six-Monthly Compliance Report.   | Point is noted and complied.  |
| v         | Self-environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.   | Point is noted and complied.  |
| <b>X</b>  | <b>Miscellaneous</b>  |   |
| i         | The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be   | The copy of published information (in newspapers) regarding grant of Environmental Clearance is enclosed here with as <b>Annexure-4</b> . |

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|      | displayed in the project proponent's website permanently.  |   |
| ii   | The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.   | Point is noted and compliance.  |
| iii  | The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.   | Condition noted and complied.   |
| iv   | The project proponent shall monitor the criteria pollutants level namely; PM <sub>10</sub> , SO <sub>2</sub> , NO <sub>x</sub> (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company. | Online Monitoring System has been provided at the outlet of ETP. Same is displayed. |
| v    | The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.  | Condition noted and complied.   |
| vi   | The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.   | Unit has submitted environmental statement in Form-V as per schedule.               |
| vii  | The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.   | Condition noted and complied  |
| viii | The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.   | Point is noted and complied.  |
| ix   | The project proponent shall abide by all the commitments and recommendations made in the EIA/ EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.   | Condition noted and complied.   |

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| x    | No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).   | Point is noted and agreed.                       |
| xi   | Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.   | No any Concealing of factual data has been done. |
| xii  | The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.  | Condition noted and agreed.                      |
| xiii | The Ministry reserves the right to stipulate additional conditions if found necessary.   | Condition noted and agreed.                      |
| xiv  | The Company in a time bound manner shall implement these conditions.   | Condition noted and agreed.                      |
| xv   | The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data/ information/ monitoring reports.  | Condition noted and agreed.                      |
| xvi  | The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India/ High Courts and any other Court of Law relating to the subject matter. | Condition noted and agreed.                      |
| xvii | Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.   | Condition noted and agreed.                      |

## **CHAPTER No. 03**

### **DETAILS OF ENVIRONMENTAL MONITORING**

#### **3.1 AMBIENT AIR QUALITY MONITORING**

##### **3.1.1 Ambient air Quality Monitoring Stations**

Ambient air quality monitoring has been carried out 04 locations to assess the ambient air quality. This will enable to have analytical understanding about air quality and the changes in the air environment in the study area with respect to the condition prevailing. The locations of the ambient air quality monitoring stations are given in **Table-3. 7 \*1: -**

**Table-3.1:**  
**Details of Ambient Air Quality Monitoring Stations**

| <b>Sr. No.</b> | <b>Location Code</b> | <b>Location Name/ Description</b> | <b>Environmental Setting of surrounding</b> | <b>Date of Monitoring</b> |
|----------------|----------------------|-----------------------------------|---|---------------------------|
| 1.             | AAQ - 01             | Near Main Gate                    | Industrial                                  | 18.09.2024 to 19.09.2024  |
| 2.             | AAQ - 02             | Village: Nagaria Sadat            | Residential                                 | 18.09.2024 to 19.09.2024  |
| 3.             | AAQ - 03             | Village: Jatan                    | Residential                                 | 22.02.2024 to 23.02.2024  |
| 4.             | AAQ - 04             | Village: Sindhuli                 | -   | 22.02.2024 to 23.02.2024  |

##### **AAQ - 01: Near Main Gate**

The sampler was placed Near Main Gate and was free from any obstructions. Surroundings of the sampling site represent industrial environmental setting.

##### **AAQ - 02: Village: Nagaria Sadat**

The sampler was placed at Village: Nagaria Sadat and was free from any obstructions. Surroundings of the sampling site represent residential environmental setting.

##### **AAQ - 03: Village: Jatan**

The sampler was placed at Village: Jatan and was free from any obstructions. Surroundings of the sampling site represent industrial environmental setting.

##### **AAQ - 04: Village: Sindhuli**

The sampler was placed at Village: Sindhuli and was free from any obstructions. Surroundings of the sampling site represent industrial environmental setting.

##### **3.1.2 Ambient Air Quality Monitoring Methodology**

Monitoring was conducted in respect of the following parameters:

- Respirable Suspended Particulate Matter (PM<sub>10</sub>)
- Fine Particulate Matter (PM<sub>2.5</sub>)
- Sulphur Dioxide (SO<sub>2</sub>)
- Oxides of Nitrogen (NO<sub>x</sub>)

The duration of sampling of PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub> and NO<sub>x</sub> was 24 hourly continuous sampling per day duration monitoring. The monitoring was conducted for one day at the location. This is to allow a comparison with the National Ambient Air Quality Standards.

The air samples were analyzed as per standard methods specified by Indian Standards (IS: 5182). The techniques used for ambient air quality monitoring and minimum detectable levels are given in **Table-3.2**.

Fine Particulate Sampler instruments have been used for monitoring Particulate Matter 2.5 (PM<sub>2.5</sub> i.e. <2.5 microns), and Respirable Dust Sampler with gaseous sampling attachment was used for sampling Respirable fraction (<10 microns), gaseous pollutants like SO<sub>2</sub>, and NO<sub>x</sub>.

**Table-3.2:**  
**Techniques used for Ambient Air Quality Monitoring**

| <b>Sr. No</b> | <b>Parameter</b>  | <b>Technique</b>  | <b>Range of testing /limit of detection</b> |
|---------------|---|---|---|
| 1.            | Respirable Suspended Particulate Matter (PM <sub>10</sub> ) | Respirable Dust Sampler, with cyclone separator, Gravimetric Method | 5.0 - 1200                                  |
| 2.            | Fine Particulate Matter (PM <sub>2.5</sub> )                | Fine Particulate Sampler, Gravimetric Method                        | 2.0 - 500                                   |
| 3.            | Sulphur dioxide   | Modified West and Gaeke   | 5.0 - 1050                                  |
| 4.            | Oxides of Nitrogen  | Jacob & Hochheiser  | 6.0 - 750                                   |

### **3.1.3 Ambient Air Quality Monitoring Results Near Main Gate**

The detailed on-site monitoring results of PM<sub>2.5</sub>, PM<sub>10</sub>, SO<sub>2</sub> and NO<sub>x</sub> are presented in **Table-3.3**.

**Table-3.3:**  
**Ambient Air Quality Monitoring Results Near Main Gate**

| <b>Sr. No</b> | <b>Particulars</b>  | <b>Protocol</b>                              | <b>Unit</b>              | <b>Result</b> | <b>Range of testing /limit of detection</b> | <b>Standard as per NAAQS; dated 18/11/ 2009</b> |
|---------------|---|--|--------------------------|---------------|---|---|
| 1             | <b>Particulate matters size less than 10 <math>\mu\text{m}</math> (PM<sub>10</sub>)</b>   | IS: 5182 (Part-23): 2006<br>Reaffirmed: 2022 | $\mu\text{g}/\text{m}^3$ | <b>89.4</b>   | 5.0 - 1200                                  | For 24 hour =100                                |
| 2             | <b>Particulate matters size less than 2.5 <math>\mu\text{m}</math> (PM<sub>2.5</sub>)</b> | IS: 5182 (Part-24): 2019                     | $\mu\text{g}/\text{m}^3$ | <b>53.18</b>  | 2.0 - 500                                   | For 24 hour =60                                 |
| 3             | <b>Sulphur Dioxides (SO<sub>2</sub>)</b>  | IS: 5182 (Part-2): 2001<br>Reaffirmed: 2022  | $\mu\text{g}/\text{m}^3$ | <b>14.56</b>  | 5.0 - 1050                                  | For 24 hour =80                                 |
| 4             | <b>Oxides of nitrogen (NO<sub>x</sub>)</b>  | IS: 5182 (Part-6): 2006<br>Reaffirmed: 2022  | $\mu\text{g}/\text{m}^3$ | <b>21.39</b>  | 6.0 - 750                                   | For 24 hour =80                                 |

### **3.1.4 Ambient Air Quality Monitoring Results at Village: Nagaria Sadat**

The detailed on-site monitoring results of PM<sub>2.5</sub>, PM<sub>10</sub>, SO<sub>2</sub> and NO<sub>x</sub> are presented in **Table-3.4**.

**Table-3.4: Ambient Air Quality Monitoring Results at Village: Nagaria Sadat**

| <b>Sr. No</b> | <b>Particulars</b>  | <b>Protocol</b>                              | <b>Unit</b>              | <b>Result</b> | <b>Range of testing /limit of detection</b> | <b>Standard as per NAAQS; dated 18/11/ 2009</b> |
|---------------|---|--|--------------------------|---------------|---|---|
| 1             | <b>Particulate matters size less than 10 <math>\mu\text{m}</math> (<math>\text{PM}_{10}</math>)</b>   | IS: 5182 (Part-23): 2006<br>Reaffirmed: 2022 | $\mu\text{g}/\text{m}^3$ | <b>78.6</b>   | 5.0 - 1200                                  | For 24 hour =100                                |
| 2             | <b>Particulate matters size less than 2.5 <math>\mu\text{m}</math> (<math>\text{PM}_{2.5}</math>)</b> | IS: 5182 (Part-24): 2019                     | $\mu\text{g}/\text{m}^3$ | <b>49.48</b>  | 2.0 - 500                                   | For 24 hour =60                                 |
| 3             | <b>Sulphur Dioxides (<math>\text{SO}_2</math>)</b>  | IS: 5182 (Part-2): 2001<br>Reaffirmed: 2022  | $\mu\text{g}/\text{m}^3$ | <b>12.63</b>  | 5.0 - 1050                                  | For 24 hour =80                                 |
| 4             | <b>Oxides of nitrogen (<math>\text{NO}_x</math>)</b>  | IS: 5182 (Part-6): 2006<br>Reaffirmed: 2022  | $\mu\text{g}/\text{m}^3$ | <b>17.51</b>  | 6.0 - 750                                   | For 24 hour =80                                 |

### **3.1.5 Ambient Air Quality Monitoring Results at Village: Jatan**

The detailed on-site monitoring results of  $\text{PM}_{2.5}$ ,  $\text{PM}_{10}$ ,  $\text{SO}_2$  and  $\text{NO}_x$  are presented in **Table-3.5.**

**Table-3.5: Ambient Air Quality Monitoring Results at Village: Jatan**

| <b>Sr. No</b> | <b>Particulars</b>  | <b>Protocol</b>                              | <b>Unit</b>              | <b>Result</b> | <b>Range of testing /limit of detection</b> | <b>Standard as per NAAQS; dated 18/11/ 2009</b> |
|---------------|---|--|--------------------------|---------------|---|---|
| 1             | <b>Particulate matters size less than 10 <math>\mu\text{m}</math> (<math>\text{PM}_{10}</math>)</b>   | IS: 5182 (Part-23): 2006<br>Reaffirmed: 2022 | $\mu\text{g}/\text{m}^3$ | <b>77.6</b>   | 5.0 - 1200                                  | For 24 hour =100                                |
| 2             | <b>Particulate matters size less than 2.5 <math>\mu\text{m}</math> (<math>\text{PM}_{2.5}</math>)</b> | IS: 5182 (Part-24): 2019                     | $\mu\text{g}/\text{m}^3$ | <b>48.50</b>  | 2.0 - 500                                   | For 24 hour =60                                 |
| 3             | <b>Sulphur Dioxides (<math>\text{SO}_2</math>)</b>  | IS: 5182 (Part-2): 2001<br>Reaffirmed: 2022  | $\mu\text{g}/\text{m}^3$ | <b>12.45</b>  | 5.0 - 1050                                  | For 24 hour =80                                 |
| 4             | <b>Oxides of nitrogen (<math>\text{NO}_x</math>)</b>  | IS: 5182 (Part-6): 2006<br>Reaffirmed: 2022  | $\mu\text{g}/\text{m}^3$ | <b>17.94</b>  | 6.0 - 750                                   | For 24 hour =80                                 |

### **3.1.6 Ambient Air Quality Monitoring Results at Village: Sindhauli**

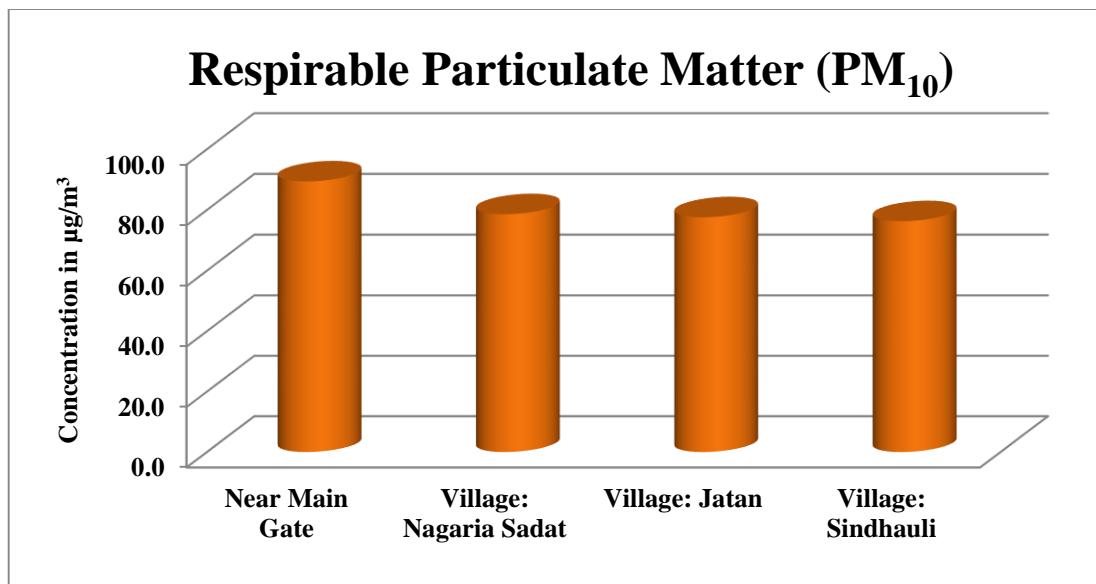
The detailed on-site monitoring results of  $\text{PM}_{2.5}$ ,  $\text{PM}_{10}$ ,  $\text{SO}_2$  and  $\text{NO}_x$  are presented in **Table-3.6.**

**Table-3.6: Ambient Air Quality Monitoring Results at Village: Sindhauli**

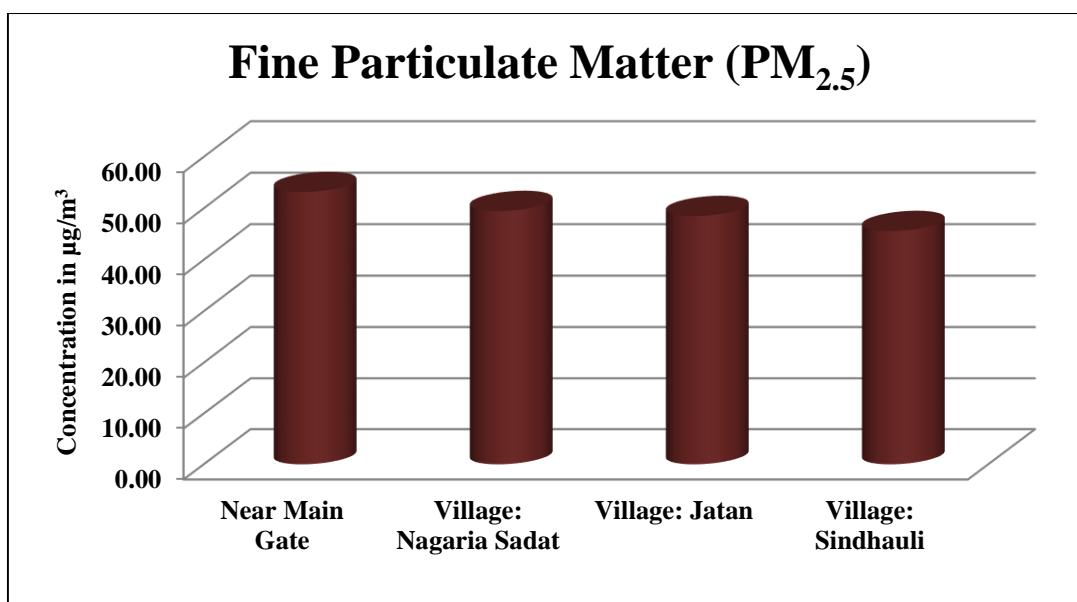
| <b>Sr. No</b> | <b>Particulars</b>  | <b>Protocol</b>                              | <b>Unit</b>              | <b>Result</b> | <b>Range of testing /limit of detection</b> | <b>Standard as per NAAQS; dated 18/11/ 2009</b> |
|---------------|---|--|--------------------------|---------------|---|---|
| 1             | <b>Particulate matters size less than 10 <math>\mu\text{m}</math> (<math>\text{PM}_{10}</math>)</b>   | IS: 5182 (Part-23): 2006<br>Reaffirmed: 2022 | $\mu\text{g}/\text{m}^3$ | <b>76.3</b>   | 5.0 - 1200                                  | For 24 hour =100                                |
| 2             | <b>Particulate matters size less than 2.5 <math>\mu\text{m}</math> (<math>\text{PM}_{2.5}</math>)</b> | IS: 5182 (Part-24): 2019                     | $\mu\text{g}/\text{m}^3$ | <b>45.59</b>  | 2.0 - 500                                   | For 24 hour =60                                 |
| 3             | <b>Sulphur Dioxides (<math>\text{SO}_2</math>)</b>  | IS: 5182 (Part-2): 2001<br>Reaffirmed: 2022  | $\mu\text{g}/\text{m}^3$ | <b>12.06</b>  | 5.0 - 1050                                  | For 24 hour =80                                 |
| 4             | <b>Oxides of nitrogen (<math>\text{NO}_x</math>)</b>  | IS: 5182 (Part-6): 2006<br>Reaffirmed: 2022  | $\mu\text{g}/\text{m}^3$ | <b>17.48</b>  | 6.0 - 750                                   | For 24 hour =80                                 |

### **3.1.7 Discussion on Ambient Air Quality in the Study Area**

The value of  $PM_{10}$  at Ambient Air Monitoring at all 04 locations are  $89.4 \mu\text{g}/\text{m}^3$ ,  $78.6 \mu\text{g}/\text{m}^3$ ,  $77.6 \mu\text{g}/\text{m}^3$  &  $76.3 \mu\text{g}/\text{m}^3$  respectively which were within permissible limit of  $100 \mu\text{g}/\text{m}^3$  and  $PM_{2.5}$  levels are  $53.18 \mu\text{g}/\text{m}^3$  Near Main Gate,  $49.48 \mu\text{g}/\text{m}^3$  Village: Nagaria Sadat,  $48.50 \mu\text{g}/\text{m}^3$  at Village: Jatan and  $45.59 \mu\text{g}/\text{m}^3$  at Village: Sindhaul, were also observed within permissible limit of  $60 \mu\text{g}/\text{m}^3$  (for residential, rural and other areas as stipulated in the National Ambient Air Quality Standards).  $SO_2$  ranges between  $12.06 \mu\text{g}/\text{m}^3$  to  $14.56 \mu\text{g}/\text{m}^3$  and  $NO_x$  ranges between  $17.48 \mu\text{g}/\text{m}^3$  to  $21.39 \mu\text{g}/\text{m}^3$  was also observed within the corresponding stipulated limits (Limit for  $SO_2$  and  $NO_x$ ;  $80 \mu\text{g}/\text{m}^3$ ) at all of the 2 monitoring locations. Station wise variation of ambient air quality parameters has been graphically shown in **Figure-3.1 to 3.4**.



**Figure-3.1: Graphs Showing  $PM_{10}$  Concentration at all sites**



**Figure-3.2: Graphs Showing  $PM_{2.5}$  Concentration at all sites**

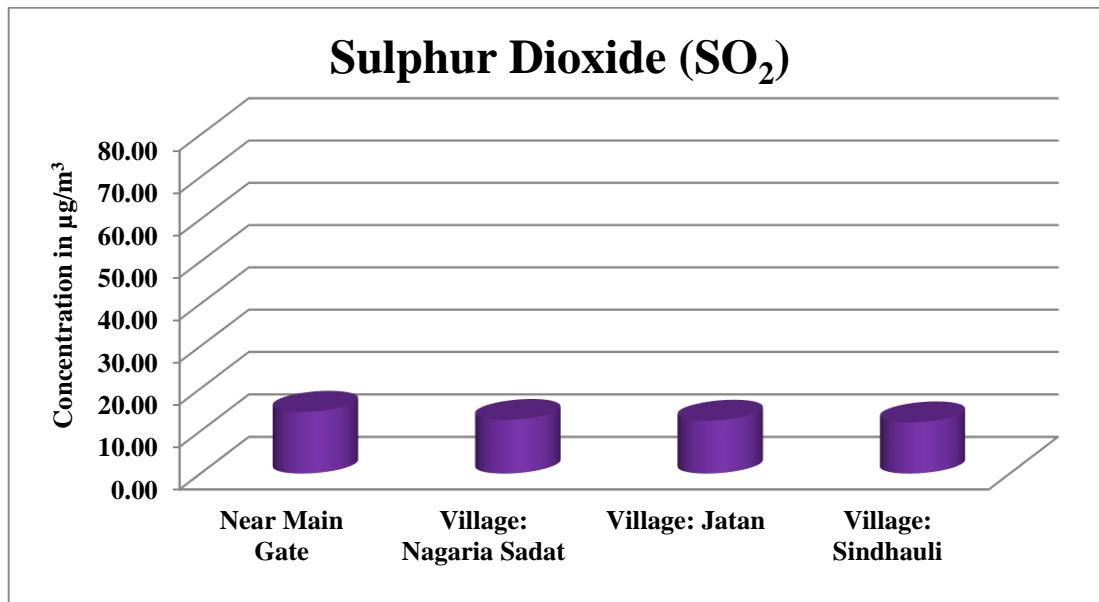


Figure-3.3: Graphs Showing SO<sub>2</sub> Concentration at all sites

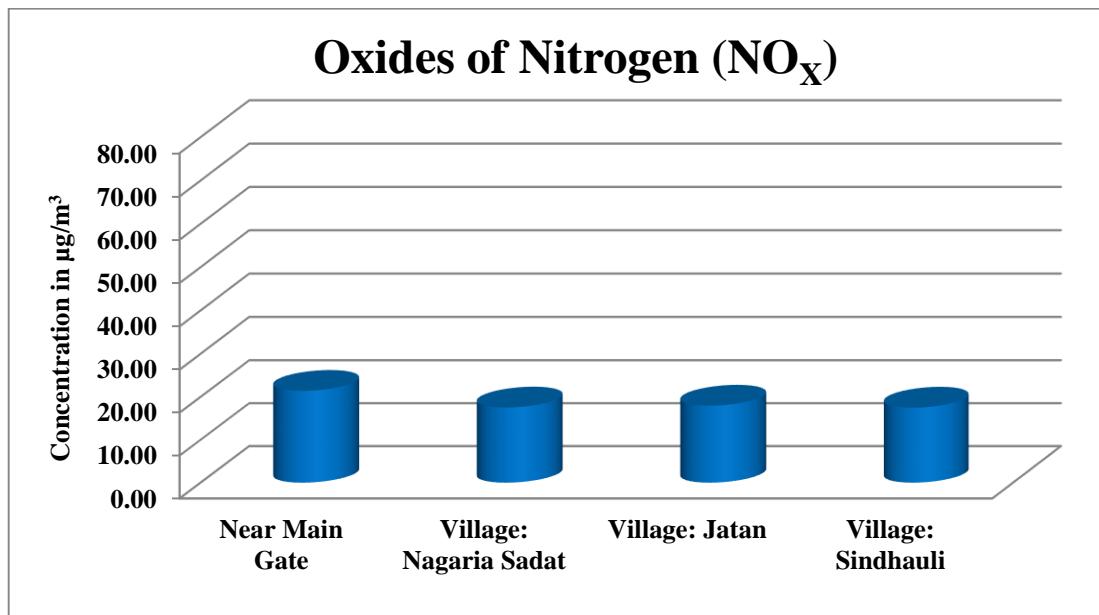


Figure-3.4: Graphs Showing NO<sub>X</sub> Concentration at all sites

### 3.2 AMBIENT NOISE MONITORING

#### 3.2.1 Ambient Noise Monitoring Locations

The main objective of noise monitoring in the study area is to assess the present ambient noise levels near project site due to various Industrial activities and increased vehicular movement. A preliminary reconnaissance survey has been undertaken to identify the major noise generating sources in the area. Ambient noise monitoring was conducted at 1 location as given in **Table-3.8**.

**Table-3.8: Details of Ambient Noise Monitoring Stations**

| <b>Sr. No</b> | <b>Location Code</b> | <b>Location name and description</b> | <b>Date of Monitoring</b> |
|---------------|----------------------|--------------------------------------|---------------------------|
| 1.            | NQ - 01              | Near Plant Premises                  | 19/09/2024 to 20/09/2024  |

### **3.2.2 Methodology of Noise Monitoring**

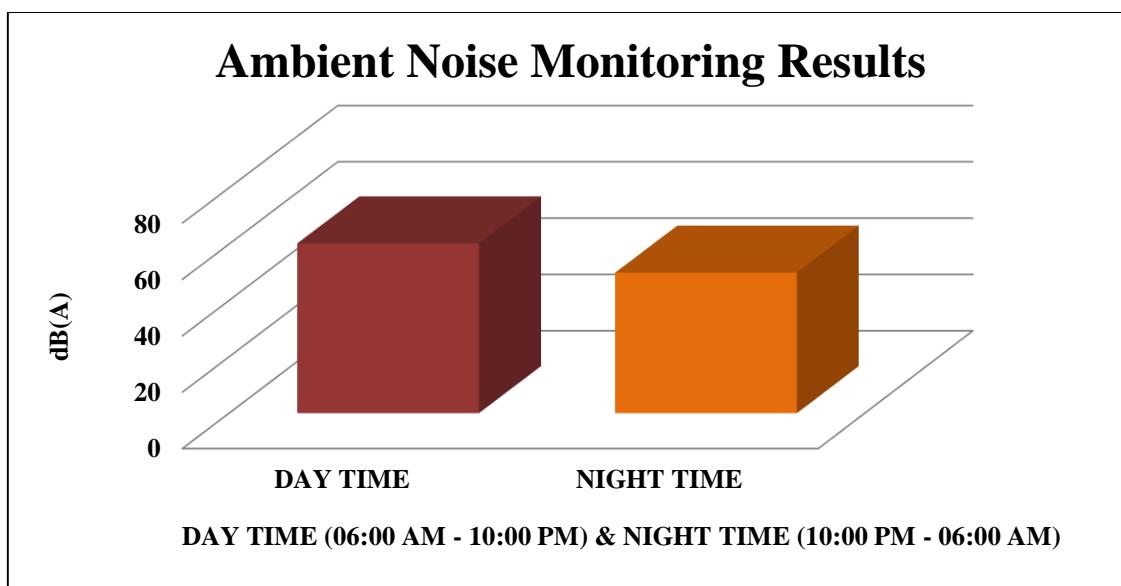
Noise levels were measured using sound level meter. Noise level monitoring was carried out continuously for 24-hours with one-hour interval starting at 06:00 hrs to 06:00 hrs next day. The noise levels were monitored on working days only. During each hour Leq were directly computed by the instrument based on the sound pressure levels. Monitoring was carried out at 'A' response.

### **3.2.3 Ambient Noise Monitoring Results**

The location wise ambient noise monitoring results is summarized in **Table-3.9**. The noise levels are graphically presented in **Figure-3.5**.

**Table-3.9:  
Ambient Noise Monitoring Results**

| <b>Ambient Noise Level</b> |                     |             |   |   |
|----------------------------|---------------------|-------------|---|---|
| <b>Sr. No.</b>             | <b>Locations</b>    | <b>Unit</b> | <b>Results<br/>Day Time<br/>(06:00 AM - 10:00 PM)</b> | <b>Results<br/>Night Time<br/>(10:00 PM - 06:00 AM)</b> |
| 1.                         | Near Plant Premises | dB(A)       | 60.23   | 49.85   |



**Figure-3.5: Day and Night Time noise Level at Near Plant Premises**

**Table-3.10: Noise Standards as per CPCB Schedule rule 3(1) and 4(1)**

| <b>Area Code</b> | <b>Category of Area/Zone</b> | <b>Limits in dB(A) Leq</b> |                   |
|------------------|------------------------------|----------------------------|-------------------|
|                  |                              | <b>Day Time</b>            | <b>Night Time</b> |
| A                | Industrial Area              | 75                         | 70                |
| B                | Commercial Area              | 65                         | 55                |

|   |                  |    |    |
|---|------------------|----|----|
| C | Residential Area | 55 | 45 |
| B | Silence Zone     | 50 | 40 |

### **3.2.4 Discussion on Ambient Noise Levels in the Study Area**

#### **Day Time Noise Levels (L<sub>dav</sub>):**

The day time noise level at monitoring station was found 60.23 dB(A), which is within limits prescribed for industrial area i.e. 75 db (A).

#### **Night Time Noise Levels (L<sub>night</sub>):**

The night time noise level at monitoring station was found 49.85 dB(A), which is within limit prescribed for industrial area i.e. 70 dB (A).

## **3.3 GROUND WATER QUALITY MONITORING**

### **3.3.1 Ground water Quality Monitoring Locations**

Keeping in view the importance of ground water, sample of ground water was collected from the project site for the assessment of impacts of the project on the groundwater quality.

Water sample was collected from the project site. The sample was analyzed for various parameters to compare with the standards for Ground water as per IS: 10500 for Groundwater sources. The details of water sampling locations are given in **Table-3.11**.

**Table-3.11:**  
**Details of Water Quality Monitoring Station**

| <b>Sr. No</b> | <b>Location Code</b> | <b>Location name and description</b> | <b>Date of Monitoring</b>              |
|---------------|----------------------|--------------------------------------|--|
| 1.            | GW - 01              | <b>Borewell Water</b>                | <b>17<sup>th</sup> April, 2024</b>     |
| 2.            | GW - 02              | <b>Borewell Water</b>                | <b>09<sup>th</sup> May, 2024</b>       |
| 3.            | GW - 03              | <b>Borewell Water</b>                | <b>13<sup>th</sup> June, 2024</b>      |
| 4.            | GW - 04              | <b>Borewell Water</b>                | <b>15<sup>th</sup> July, 2024</b>      |
| 5.            | GW - 05              | <b>Borewell Water</b>                | <b>16<sup>th</sup> August, 2024</b>    |
| 6.            | GW - 06              | <b>Borewell Water</b>                | <b>20<sup>th</sup> September, 2024</b> |

### **3.3.2 Methodology of ground water Quality Monitoring**

Sampling of ground water was carried out on 17.04.2024, 09.05.2024, 13.06.2024, 15.07.2024 16.08.2024 & 20.09.2024. Samples were collected as grab sample and sampling forms are filled in as per the sampling plan. The preservative sample were properly added to preserve as per standard operating procedures (SOP) and stored immediately in ice boxes, which were ensured for appropriate temperatures. **Sample for chemical analysis was collected in polyethylene carboys. Sample collected for metal content were acidified to <2 pH with 1 ml HNO<sub>3</sub>.**

Soon after the completion of sampling, chain of custody sheets for the samples are filled in and then they were transported by road to Environmental & Technical Research Centre, Lucknow for further analysis. Proper care was taken during packing and transportation of samples. All the samples reached the central laboratory within the holding times for different parameters. After ensuring the same the samples were forwarded immediately for analysis.

The samples were analyzed as per the standard procedures specified in 'Standard Methods for the Examination of Water and Wastewater' published by American Public Health Association (APHA) and CPCB. The analytical techniques and the test methods adopted for testing of ground water are given in **Table-3.12 - Table-3.17**.

### **3.3.3 Ground water Quality Monitoring Results**

The detailed Ground water quality monitoring results are presented in **Table-3.12 - Table-3.17**.

**Table-3.12:  
Ground water Quality Results at Borewell Water (April, 2024)**

| Sr. No                             | Test Parameter   | Unit        | Protocol/Test Method   | Result    | Range of testing /limit of detection | Indian Standard 10500: 2012                |               |
|------------------------------------|--|-------------|--|-----------|--------------------------------------|--|---------------|
|                                    |  |             |  |           |                                      | Desirable                                  | Permissible   |
| <b>Physico-chemical Parameters</b> |  |             |  |           |                                      |  |               |
| 1                                  | <b>Colour</b>  | Hazen       | IS: 3025 (Part-04): 2021   | <5.0      | 5 - 30                               | 5  | 15            |
| 2                                  | <b>Odour</b>   | -           | IS: 3025 (Part-05): 2018   | Agreeable | Qualitative                          | Agreeable                                  | Agreeable     |
| 3                                  | <b>pH</b>  | -           | APHA 24 <sup>th</sup> Ed. 2023 - 4500 H <sup>+</sup>                 | 7.4       | 1 - 14                               | 6.5-8.5                                    | No Relaxation |
| 4                                  | <b>Turbidity</b>   | NTU         | APHA 24 <sup>th</sup> Ed. 2023 - 2130 B                              | <2.0      | 2 - 40                               | 1  | 5             |
| 5                                  | <b>Total Dissolved Solids (TDS)</b>                        | mg/l        | IS: 3025 (Part-16): 2023   | 396.4     | 10 - 5000                            | 500  | 2000          |
| 6                                  | <b>Ammonia (as total ammonia-N)</b>                        | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 4500-NH <sub>3</sub> F              | <0.5      | 0.5 - 2.0                            | 0.5  | No Relaxation |
| 7                                  | <b>Anionic Detergents (as MBAS)</b>                        | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 5540 C                              | <0.05     | 0.05 - 0.5                           | 0.2  | 1.0           |
| 8                                  | <b>Calcium as Ca</b>                                       | mg/l        | IS: 3025 (Part-40): 1991<br>Reaffirmed: 2019                         | 56.0      | 2.0 - 600                            | 75   | 200           |
| 9                                  | <b>Magnesium as Mg</b>                                     | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3500 Mg, B                          | 29.16     | 0.1 - 200                            | 30   | 100           |
| 10                                 | <b>Chloride as Cl</b>                                      | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 4500-Cl <sup>-</sup> B              | 26.0      | 2.0 - 2000                           | 250  | 1000          |
| 11                                 | <b>Fluoride as F</b>                                       | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 4500 F <sup>-</sup> C               | 0.33      | 0.02 - 5.0                           | 1.0  | 1.5           |
| 12                                 | <b>Free Residual Chlorine</b>                              | mg/l        | IS: 3025 (Part-26): 1986<br>Reaffirmed: 2019                         | <0.1      | 0.1 - 5.0                            | 0.2  | 1.0           |
| 13                                 | <b>Nitrate as NO<sub>3</sub></b>                           | mg/l        | IS: 3025 (Part-34): 1986<br>Reaffirmed: 2019                         | <1.0      | 1.0 - 70                             | 45   | No Relaxation |
| 14                                 | <b>Phenolic Compound (as C<sub>6</sub>H<sub>5</sub>OH)</b> | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 5530 C                              | <0.001    | 0.001 - 0.005                        | 0.001                                      | 0.002         |
| 15                                 | <b>Sulphate as SO<sub>4</sub></b>                          | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 4500- SO <sub>4</sub> <sup>2-</sup> | 26.0      | 1.0 - 500                            | 200  | 400           |
| 16                                 | <b>Alkalinity as CaCO<sub>3</sub></b>                      | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 2320 B                              | 288.0     | 2.0 - 1000                           | 200  | 600           |
| 17                                 | <b>Total Hardness as CaCO<sub>3</sub></b>                  | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 2340 C                              | 260.0     | 5.0 - 800                            | 200  | 600           |
| 18                                 | <b>Aluminium as Al</b>                                     | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | <0.015    | 0.015 - 5.0                          | 0.03                                       | 0.2           |
| 19                                 | <b>Boron as B</b>  | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | <0.05     | 0.05 - 2.0                           | 0.5  | 1.0           |
| 20                                 | <b>Copper as Cu</b>  | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | <0.03     | 0.03 - 10                            | 0.05                                       | 1.5           |
| 21                                 | <b>Iron as Fe</b>  | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | 0.20      | 0.05 - 20                            | 0.3  | No Relaxation |
| 22                                 | <b>Manganese as Mn</b>                                     | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | 0.03      | 0.02 - 5.0                           | 0.1  | 0.3           |
| 23                                 | <b>Zinc as Zn</b>  | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | 0.24      | 0.05 - 15                            | 5  | 15            |
| 24                                 | <b>Cadmium as Cd</b>                                       | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | <0.003    | 0.003 - 2.0                          | 0.003                                      | No Relaxation |
| 25                                 | <b>Lead as Pb</b>  | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | <0.01     | 0.01 - 10                            | 0.01                                       | No Relaxation |
| 26                                 | <b>Mercury as Hg</b>                                       | µg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3112 B                              | <0.5      | 0.5 - 1000                           | 1.0  | No Relaxation |
| 27                                 | <b>Nickel as Ni</b>  | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | <0.02     | 0.02 - 5.0                           | 0.02                                       | No Relaxation |
| 28                                 | <b>Arsenic as As</b>                                       | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | <0.02     | 0.02 - 2                             | 0.01                                       | 0.05          |
| 29                                 | <b>Total Chromium</b>                                      | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | <0.03     | 0.03 - 5.0                           | 0.05                                       | No Relaxation |
| <b>Microbiological Parameters</b>  |  |             |  |           |                                      |  |               |
| 30                                 | <b>E. coli</b>   | MPN/ 100 ml | IS: 1622 - 1981<br>Reaffirmed: 2019                                  | Absent    | ≥ 2 MPN Present or Absent per 100 ml | Shall not be detected in any 100 ml sample |               |
| 31                                 | <b>T. coli</b>   | MPN/ 100 ml | IS: 1622 - 1981<br>Reaffirmed: 2019                                  | Absent    | ≥ 2 MPN Present or Absent per 100 ml | Shall not be detected in any 100 ml sample |               |

**Table-3.13:  
Ground water Quality Results at Borewell Water (May, 2024)**

| Sr. No                             | Test Parameter   | Unit        | Protocol/Test Method   | Result    | Range of testing /limit of detection    | Indian Standard 10500: 2012                   |               |
|------------------------------------|--|-------------|--|-----------|---|---|---------------|
|                                    |  |             |  |           |   | Desirable                                     | Permissible   |
| <b>Physico-chemical Parameters</b> |  |             |  |           |   |   |               |
| 1                                  | <b>Colour</b>  | Hazen       | IS: 3025 (Part-04): 2021   | <5.0      | 5 - 30                                  | 5   | 15            |
| 2                                  | <b>Odour</b>   | -           | IS: 3025 (Part-05): 2018   | Agreeable | Qualitative                             | Agreeable                                     | Agreeable     |
| 3                                  | <b>pH</b>  | -           | APHA 24 <sup>th</sup> Ed. 2023 - 4500 H <sup>+</sup>                 | 7.5       | 1 - 14                                  | 6.5-8.5                                       | No Relaxation |
| 4                                  | <b>Turbidity</b>   | NTU         | APHA 24 <sup>th</sup> Ed. 2023 - 2130 B                              | <2.0      | 2 - 40                                  | 1   | 5             |
| 5                                  | <b>Total Dissolved Solids (TDS)</b>                        | mg/l        | IS: 3025 (Part-16): 2023   | 406.8     | 10 - 5000                               | 500   | 2000          |
| 6                                  | <b>Ammonia (as total ammonia-N)</b>                        | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 4500-NH <sub>3</sub> F              | <0.5      | 0.5 - 2.0                               | 0.5   | No Relaxation |
| 7                                  | <b>Anionic Detergents (as MBAS)</b>                        | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 5540 C                              | <0.05     | 0.05 - 0.5                              | 0.2   | 1.0           |
| 8                                  | <b>Calcium as Ca</b>                                       | mg/l        | IS: 3025 (Part-40): 1991<br>Reaffirmed: 2019                         | 51.2      | 2.0 - 600                               | 75  | 200           |
| 9                                  | <b>Magnesium as Mg</b>                                     | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3500 Mg, B                          | 30.13     | 0.1 - 200                               | 30  | 100           |
| 10                                 | <b>Chloride as Cl</b>                                      | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 4500-Cl <sup>-</sup> B              | 22.0      | 2.0 - 2000                              | 250   | 1000          |
| 11                                 | <b>Fluoride as F</b>                                       | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 4500 F <sup>-</sup> C               | 0.34      | 0.02 - 5.0                              | 1.0   | 1.5           |
| 12                                 | <b>Free Residual Chlorine</b>                              | mg/l        | IS: 3025 (Part-26): 1986<br>Reaffirmed: 2019                         | <0.1      | 0.1 - 5.0                               | 0.2   | 1.0           |
| 13                                 | <b>Nitrate as NO<sub>3</sub></b>                           | mg/l        | IS: 3025 (Part-34): 1986<br>Reaffirmed: 2019                         | <1.0      | 1.0 - 70                                | 45  | No Relaxation |
| 14                                 | <b>Phenolic Compound (as C<sub>6</sub>H<sub>5</sub>OH)</b> | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 5530 C                              | <0.001    | 0.001 - 0.005                           | 0.001   | 0.002         |
| 15                                 | <b>Sulphate as SO<sub>4</sub></b>                          | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 4500- SO <sub>4</sub> <sup>2-</sup> | 28.0      | 1.0 - 500                               | 200   | 400           |
| 16                                 | <b>Alkalinity as CaCO<sub>3</sub></b>                      | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 2320 B                              | 276.0     | 2.0 - 1000                              | 200   | 600           |
| 17                                 | <b>Total Hardness as CaCO<sub>3</sub></b>                  | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 2340 C                              | 252.0     | 5.0 - 800                               | 200   | 600           |
| 18                                 | <b>Aluminium as Al</b>                                     | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | <0.015    | 0.015 - 5.0                             | 0.03  | 0.2           |
| 19                                 | <b>Boron as B</b>  | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | <0.05     | 0.05 - 2.0                              | 0.5   | 1.0           |
| 20                                 | <b>Copper as Cu</b>  | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | <0.03     | 0.03 - 10                               | 0.05  | 1.5           |
| 21                                 | <b>Iron as Fe</b>  | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | 0.16      | 0.05 - 20                               | 0.3   | No Relaxation |
| 22                                 | <b>Manganese as Mn</b>                                     | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | 0.02      | 0.02 - 5.0                              | 0.1   | 0.3           |
| 23                                 | <b>Zinc as Zn</b>  | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | 0.33      | 0.05 - 15                               | 5   | 15            |
| 24                                 | <b>Cadmium as Cd</b>                                       | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | <0.003    | 0.003 - 2.0                             | 0.003   | No Relaxation |
| 25                                 | <b>Lead as Pb</b>  | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | <0.01     | 0.01 - 10                               | 0.01  | No Relaxation |
| 26                                 | <b>Mercury as Hg</b>                                       | µg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3112 B                              | <0.5      | 0.5 - 1000                              | 1.0   | No Relaxation |
| 27                                 | <b>Nickel as Ni</b>  | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | <0.02     | 0.02 - 5.0                              | 0.02  | No Relaxation |
| 28                                 | <b>Arsenic as As</b>                                       | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | <0.02     | 0.02 - 2                                | 0.01  | 0.05          |
| 29                                 | <b>Total Chromium</b>                                      | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | <0.03     | 0.03 - 5.0                              | 0.05  | No Relaxation |
| <b>Microbiological Parameters</b>  |  |             |  |           |   |   |               |
| 30                                 | <b>E. coli</b>   | MPN/ 100 ml | IS: 1622 - 1981<br>Reaffirmed: 2019                                  | Absent    | ≥ 2 MPN Present or<br>Absent per 100 ml | Shall not be detected in any<br>100 ml sample |               |
| 31                                 | <b>T. coli</b>   | MPN/ 100 ml | IS: 1622 - 1981<br>Reaffirmed: 2019                                  | Absent    | ≥ 2 MPN Present or<br>Absent per 100 ml | Shall not be detected in any<br>100 ml sample |               |

**Table-3.14:  
Ground water Quality Results at Borewell Water (June, 2024)**

| Sr. No                             | Test Parameter   | Unit        | Protocol/Test Method   | Result    | Range of testing /limit of detection    | Indian Standard 10500: 2012                   |               |
|------------------------------------|--|-------------|--|-----------|---|---|---------------|
|                                    |  |             |  |           |   | Desirable                                     | Permissible   |
| <b>Physico-chemical Parameters</b> |  |             |  |           |   |   |               |
| 1                                  | <b>Colour</b>  | Hazen       | IS: 3025 (Part-04): 2021   | <5.0      | 5 - 30                                  | 5   | 15            |
| 2                                  | <b>Odour</b>   | -           | IS: 3025 (Part-05): 2018   | Agreeable | Qualitative                             | Agreeable                                     | Agreeable     |
| 3                                  | <b>pH</b>  | -           | APHA 24 <sup>th</sup> Ed. 2023 - 4500 H <sup>+</sup>                 | 7.5       | 1 - 14                                  | 6.5-8.5                                       | No Relaxation |
| 4                                  | <b>Turbidity</b>   | NTU         | APHA 24 <sup>th</sup> Ed. 2023 - 2130 B                              | <2.0      | 2 - 40                                  | 1   | 5             |
| 5                                  | <b>Total Dissolved Solids (TDS)</b>                        | mg/l        | IS: 3025 (Part-16): 2023   | 396.0     | 10 - 5000                               | 500   | 2000          |
| 6                                  | <b>Ammonia (as total ammonia-N)</b>                        | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 4500-NH <sub>3</sub> F              | <0.5      | 0.5 - 2.0                               | 0.5   | No Relaxation |
| 7                                  | <b>Anionic Detergents (as MBAS)</b>                        | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 5540 C                              | <0.05     | 0.05 - 0.5                              | 0.2   | 1.0           |
| 8                                  | <b>Calcium as Ca</b>                                       | mg/l        | IS: 3025 (Part-40): 1991<br>Reaffirmed: 2019                         | 51.2      | 2.0 - 600                               | 75  | 200           |
| 9                                  | <b>Magnesium as Mg</b>                                     | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3500 Mg, B                          | 29.16     | 0.1 - 200                               | 30  | 100           |
| 10                                 | <b>Chloride as Cl</b>                                      | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 4500-Cl <sup>-</sup> B              | 28.0      | 2.0 - 2000                              | 250   | 1000          |
| 11                                 | <b>Fluoride as F</b>                                       | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 4500 F <sup>-</sup> C               | 0.28      | 0.02 - 5.0                              | 1.0   | 1.5           |
| 12                                 | <b>Free Residual Chlorine</b>                              | mg/l        | IS: 3025 (Part-26): 1986<br>Reaffirmed: 2019                         | <0.1      | 0.1 - 5.0                               | 0.2   | 1.0           |
| 13                                 | <b>Nitrate as NO<sub>3</sub></b>                           | mg/l        | IS: 3025 (Part-34): 1986<br>Reaffirmed: 2019                         | <1.0      | 1.0 - 70                                | 45  | No Relaxation |
| 14                                 | <b>Phenolic Compound (as C<sub>6</sub>H<sub>5</sub>OH)</b> | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 5530 C                              | <0.001    | 0.001 - 0.005                           | 0.001   | 0.002         |
| 15                                 | <b>Sulphate as SO<sub>4</sub></b>                          | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 4500- SO <sub>4</sub> <sup>2-</sup> | 30.0      | 1.0 - 500                               | 200   | 400           |
| 16                                 | <b>Alkalinity as CaCO<sub>3</sub></b>                      | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 2320 B                              | 268.0     | 2.0 - 1000                              | 200   | 600           |
| 17                                 | <b>Total Hardness as CaCO<sub>3</sub></b>                  | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 2340 C                              | 248.0     | 5.0 - 800                               | 200   | 600           |
| 18                                 | <b>Aluminium as Al</b>                                     | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | <0.015    | 0.015 - 5.0                             | 0.03  | 0.2           |
| 19                                 | <b>Boron as B</b>  | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | <0.05     | 0.05 - 2.0                              | 0.5   | 1.0           |
| 20                                 | <b>Copper as Cu</b>  | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | <0.03     | 0.03 - 10                               | 0.05  | 1.5           |
| 21                                 | <b>Iron as Fe</b>  | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | 0.14      | 0.05 - 20                               | 0.3   | No Relaxation |
| 22                                 | <b>Manganese as Mn</b>                                     | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | 0.06      | 0.02 - 5.0                              | 0.1   | 0.3           |
| 23                                 | <b>Zinc as Zn</b>  | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | 0.28      | 0.05 - 15                               | 5   | 15            |
| 24                                 | <b>Cadmium as Cd</b>                                       | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | <0.003    | 0.003 - 2.0                             | 0.003   | No Relaxation |
| 25                                 | <b>Lead as Pb</b>  | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | <0.01     | 0.01 - 10                               | 0.01  | No Relaxation |
| 26                                 | <b>Mercury as Hg</b>                                       | µg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3112 B                              | <0.5      | 0.5 - 1000                              | 1.0   | No Relaxation |
| 27                                 | <b>Nickel as Ni</b>  | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | <0.02     | 0.02 - 5.0                              | 0.02  | No Relaxation |
| 28                                 | <b>Arsenic as As</b>                                       | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | <0.02     | 0.02 - 2                                | 0.01  | 0.05          |
| 29                                 | <b>Total Chromium</b>                                      | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | <0.03     | 0.03 - 5.0                              | 0.05  | No Relaxation |
| <b>Microbiological Parameters</b>  |  |             |  |           |   |   |               |
| 30                                 | <b>E. coli</b>   | MPN/ 100 ml | IS: 1622 - 1981<br>Reaffirmed: 2019                                  | Absent    | ≥ 2 MPN Present or<br>Absent per 100 ml | Shall not be detected in any<br>100 ml sample |               |
| 31                                 | <b>T. coli</b>   | MPN/ 100 ml | IS: 1622 - 1981<br>Reaffirmed: 2019                                  | Absent    | ≥ 2 MPN Present or<br>Absent per 100 ml | Shall not be detected in any<br>100 ml sample |               |

**Table-3.15:  
Ground water Quality Results at Borewell Water (July, 2024)**

| Sr. No                             | Test Parameter   | Unit        | Protocol/Test Method   | Result    | Range of testing /limit of detection | Indian Standard 10500: 2012                |               |
|------------------------------------|--|-------------|--|-----------|--------------------------------------|--|---------------|
|                                    |  |             |  |           |                                      | Desirable                                  | Permissible   |
| <b>Physico-chemical Parameters</b> |  |             |  |           |                                      |  |               |
| 1                                  | <b>Colour</b>  | Hazen       | IS: 3025 (Part-04): 2021   | <5.0      | 5 - 30                               | 5  | 15            |
| 2                                  | <b>Odour</b>   | -           | IS: 3025 (Part-05): 2018   | Agreeable | Qualitative                          | Agreeable                                  | Agreeable     |
| 3                                  | <b>pH</b>  | -           | APHA 24 <sup>th</sup> Ed. 2023 - 4500 H <sup>+</sup>                 | 7.3       | 1 - 14                               | 6.5-8.5                                    | No Relaxation |
| 4                                  | <b>Turbidity</b>   | NTU         | APHA 24 <sup>th</sup> Ed. 2023 - 2130 B                              | <2.0      | 2 - 40                               | 1  | 5             |
| 5                                  | <b>Total Dissolved Solids (TDS)</b>                        | mg/l        | IS: 3025 (Part-16): 2023   | 398.6     | 10 - 5000                            | 500  | 2000          |
| 6                                  | <b>Ammonia (as total ammonia-N)</b>                        | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 4500-NH <sub>3</sub> F              | <0.5      | 0.5 - 2.0                            | 0.5  | No Relaxation |
| 7                                  | <b>Anionic Detergents (as MBAS)</b>                        | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 5540 C                              | <0.05     | 0.05 - 0.5                           | 0.2  | 1.0           |
| 8                                  | <b>Calcium as Ca</b>                                       | mg/l        | IS: 3025 (Part-40): 1991<br>Reaffirmed: 2019                         | 54.4      | 2.0 - 600                            | 75   | 200           |
| 9                                  | <b>Magnesium as Mg</b>                                     | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3500 Mg, B                          | 29.16     | 0.1 - 200                            | 30   | 100           |
| 10                                 | <b>Chloride as Cl</b>                                      | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 4500-Cl <sup>-</sup> B              | 20.0      | 2.0 - 2000                           | 250  | 1000          |
| 11                                 | <b>Fluoride as F</b>                                       | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 4500 F <sup>-</sup> C               | 0.32      | 0.02 - 5.0                           | 1.0  | 1.5           |
| 12                                 | <b>Free Residual Chlorine</b>                              | mg/l        | IS: 3025 (Part-26): 1986<br>Reaffirmed: 2019                         | <0.1      | 0.1 - 5.0                            | 0.2  | 1.0           |
| 13                                 | <b>Nitrate as NO<sub>3</sub></b>                           | mg/l        | IS: 3025 (Part-34): 1986<br>Reaffirmed: 2019                         | <1.0      | 1.0 - 70                             | 45   | No Relaxation |
| 14                                 | <b>Phenolic Compound (as C<sub>6</sub>H<sub>5</sub>OH)</b> | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 5530 C                              | <0.001    | 0.001 - 0.005                        | 0.001                                      | 0.002         |
| 15                                 | <b>Sulphate as SO<sub>4</sub></b>                          | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 4500- SO <sub>4</sub> <sup>2-</sup> | 24.0      | 1.0 - 500                            | 200  | 400           |
| 16                                 | <b>Alkalinity as CaCO<sub>3</sub></b>                      | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 2320 B                              | 280.0     | 2.0 - 1000                           | 200  | 600           |
| 17                                 | <b>Total Hardness as CaCO<sub>3</sub></b>                  | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 2340 C                              | 256.0     | 5.0 - 800                            | 200  | 600           |
| 18                                 | <b>Aluminium as Al</b>                                     | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | <0.015    | 0.015 - 5.0                          | 0.03                                       | 0.2           |
| 19                                 | <b>Boron as B</b>  | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | <0.05     | 0.05 - 2.0                           | 0.5  | 1.0           |
| 20                                 | <b>Copper as Cu</b>  | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | <0.03     | 0.03 - 10                            | 0.05                                       | 1.5           |
| 21                                 | <b>Iron as Fe</b>  | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | 0.10      | 0.05 - 20                            | 0.3  | No Relaxation |
| 22                                 | <b>Manganese as Mn</b>                                     | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | 0.02      | 0.02 - 5.0                           | 0.1  | 0.3           |
| 23                                 | <b>Zinc as Zn</b>  | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | 0.26      | 0.05 - 15                            | 5  | 15            |
| 24                                 | <b>Cadmium as Cd</b>                                       | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | <0.003    | 0.003 - 2.0                          | 0.003                                      | No Relaxation |
| 25                                 | <b>Lead as Pb</b>  | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | <0.01     | 0.01 - 10                            | 0.01                                       | No Relaxation |
| 26                                 | <b>Mercury as Hg</b>                                       | µg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3112 B                              | <0.5      | 0.5 - 1000                           | 1.0  | No Relaxation |
| 27                                 | <b>Nickel as Ni</b>  | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | <0.02     | 0.02 - 5.0                           | 0.02                                       | No Relaxation |
| 28                                 | <b>Arsenic as As</b>                                       | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | <0.02     | 0.02 - 2                             | 0.01                                       | 0.05          |
| 29                                 | <b>Total Chromium</b>                                      | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | <0.03     | 0.03 - 5.0                           | 0.05                                       | No Relaxation |
| <b>Microbiological Parameters</b>  |  |             |  |           |                                      |  |               |
| 30                                 | <b>E. coli</b>   | MPN/ 100 ml | IS: 1622 - 1981<br>Reaffirmed: 2019                                  | Absent    | ≥ 2 MPN Present or Absent per 100 ml | Shall not be detected in any 100 ml sample |               |
| 31                                 | <b>T. coli</b>   | MPN/ 100 ml | IS: 1622 - 1981<br>Reaffirmed: 2019                                  | Absent    | ≥ 2 MPN Present or Absent per 100 ml | Shall not be detected in any 100 ml sample |               |

**Table-3.16:  
Ground water Quality Results at Borewell Water (August, 2024)**

| Sr. No                             | Test Parameter   | Unit        | Protocol/Test Method   | Result    | Range of testing /limit of detection | Indian Standard 10500: 2012                |               |
|------------------------------------|--|-------------|--|-----------|--------------------------------------|--|---------------|
|                                    |  |             |  |           |                                      | Desirable                                  | Permissible   |
| <b>Physico-chemical Parameters</b> |  |             |  |           |                                      |  |               |
| 1                                  | <b>Colour</b>  | Hazen       | IS: 3025 (Part-04): 2021   | <5.0      | 5 - 30                               | 5  | 15            |
| 2                                  | <b>Odour</b>   | -           | IS: 3025 (Part-05): 2018   | Agreeable | Qualitative                          | Agreeable                                  | Agreeable     |
| 3                                  | <b>pH</b>  | -           | APHA 24 <sup>th</sup> Ed. 2023 - 4500 H <sup>+</sup>                 | 7.5       | 1 - 14                               | 6.5-8.5                                    | No Relaxation |
| 4                                  | <b>Turbidity</b>   | NTU         | APHA 24 <sup>th</sup> Ed. 2023 - 2130 B                              | <2.0      | 2 - 40                               | 1  | 5             |
| 5                                  | <b>Total Dissolved Solids (TDS)</b>                        | mg/l        | IS: 3025 (Part-16): 2023   | 390.4     | 10 - 5000                            | 500  | 2000          |
| 6                                  | <b>Ammonia (as total ammonia-N)</b>                        | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 4500-NH <sub>3</sub> F              | <0.5      | 0.5 - 2.0                            | 0.5  | No Relaxation |
| 7                                  | <b>Anionic Detergents (as MBAS)</b>                        | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 5540 C                              | <0.05     | 0.05 - 0.5                           | 0.2  | 1.0           |
| 8                                  | <b>Calcium as Ca</b>                                       | mg/l        | IS: 3025 (Part-40): 1991<br>Reaffirmed: 2019                         | 49.6      | 2.0 - 600                            | 75   | 200           |
| 9                                  | <b>Magnesium as Mg</b>                                     | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3500 Mg, B                          | 29.16     | 0.1 - 200                            | 30   | 100           |
| 10                                 | <b>Chloride as Cl</b>                                      | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 4500-Cl <sup>-</sup> B              | 24.0      | 2.0 - 2000                           | 250  | 1000          |
| 11                                 | <b>Fluoride as F</b>                                       | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 4500 F <sup>-</sup> C               | 0.24      | 0.02 - 5.0                           | 1.0  | 1.5           |
| 12                                 | <b>Free Residual Chlorine</b>                              | mg/l        | IS: 3025 (Part-26): 1986<br>Reaffirmed: 2019                         | <0.1      | 0.1 - 5.0                            | 0.2  | 1.0           |
| 13                                 | <b>Nitrate as NO<sub>3</sub></b>                           | mg/l        | IS: 3025 (Part-34): 1986<br>Reaffirmed: 2019                         | <1.0      | 1.0 - 70                             | 45   | No Relaxation |
| 14                                 | <b>Phenolic Compound (as C<sub>6</sub>H<sub>5</sub>OH)</b> | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 5530 C                              | <0.001    | 0.001 - 0.005                        | 0.001                                      | 0.002         |
| 15                                 | <b>Sulphate as SO<sub>4</sub></b>                          | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 4500- SO <sub>4</sub> <sup>2-</sup> | 26.0      | 1.0 - 500                            | 200  | 400           |
| 16                                 | <b>Alkalinity as CaCO<sub>3</sub></b>                      | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 2320 B                              | 268.0     | 2.0 - 1000                           | 200  | 600           |
| 17                                 | <b>Total Hardness as CaCO<sub>3</sub></b>                  | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 2340 C                              | 244.0     | 5.0 - 800                            | 200  | 600           |
| 18                                 | <b>Aluminium as Al</b>                                     | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | <0.015    | 0.015 - 5.0                          | 0.03                                       | 0.2           |
| 19                                 | <b>Boron as B</b>  | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | <0.05     | 0.05 - 2.0                           | 0.5  | 1.0           |
| 20                                 | <b>Copper as Cu</b>  | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | <0.03     | 0.03 - 10                            | 0.05                                       | 1.5           |
| 21                                 | <b>Iron as Fe</b>  | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | 0.13      | 0.05 - 20                            | 0.3  | No Relaxation |
| 22                                 | <b>Manganese as Mn</b>                                     | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | 0.04      | 0.02 - 5.0                           | 0.1  | 0.3           |
| 23                                 | <b>Zinc as Zn</b>  | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | 0.33      | 0.05 - 15                            | 5  | 15            |
| 24                                 | <b>Cadmium as Cd</b>                                       | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | <0.003    | 0.003 - 2.0                          | 0.003                                      | No Relaxation |
| 25                                 | <b>Lead as Pb</b>  | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | <0.01     | 0.01 - 10                            | 0.01                                       | No Relaxation |
| 26                                 | <b>Mercury as Hg</b>                                       | µg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3112 B                              | <0.5      | 0.5 - 1000                           | 1.0  | No Relaxation |
| 27                                 | <b>Nickel as Ni</b>  | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | <0.02     | 0.02 - 5.0                           | 0.02                                       | No Relaxation |
| 28                                 | <b>Arsenic as As</b>                                       | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | <0.02     | 0.02 - 2                             | 0.01                                       | 0.05          |
| 29                                 | <b>Total Chromium</b>                                      | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | <0.03     | 0.03 - 5.0                           | 0.05                                       | No Relaxation |
| <b>Microbiological Parameters</b>  |  |             |  |           |                                      |  |               |
| 30                                 | <b>E. coli</b>   | MPN/ 100 ml | IS: 1622 - 1981<br>Reaffirmed: 2019                                  | Absent    | ≥ 2 MPN Present or Absent per 100 ml | Shall not be detected in any 100 ml sample |               |
| 31                                 | <b>T. coli</b>   | MPN/ 100 ml | IS: 1622 - 1981<br>Reaffirmed: 2019                                  | Absent    | ≥ 2 MPN Present or Absent per 100 ml | Shall not be detected in any 100 ml sample |               |

**Table-3.17:  
Ground water Quality Results at Borewell Water (September, 2024)**

| Sr. No                             | Test Parameter   | Unit        | Protocol/Test Method   | Result    | Range of testing /limit of detection    | Indian Standard 10500: 2012                   |               |
|------------------------------------|--|-------------|--|-----------|---|---|---------------|
|                                    |  |             |  |           |   | Desirable                                     | Permissible   |
| <b>Physico-chemical Parameters</b> |  |             |  |           |   |   |               |
| 1                                  | <b>Colour</b>  | Hazen       | IS: 3025 (Part-04): 2021   | <5.0      | 5 - 30                                  | 5   | 15            |
| 2                                  | <b>Odour</b>   | -           | IS: 3025 (Part-05): 2018   | Agreeable | Qualitative                             | Agreeable                                     | Agreeable     |
| 3                                  | <b>pH</b>  | -           | APHA 24 <sup>th</sup> Ed. 2023 - 4500 H <sup>+</sup>                 | 7.4       | 1 - 14                                  | 6.5-8.5                                       | No Relaxation |
| 4                                  | <b>Turbidity</b>   | NTU         | APHA 24 <sup>th</sup> Ed. 2023 - 2130 B                              | <2.0      | 2 - 40                                  | 1   | 5             |
| 5                                  | <b>Total Dissolved Solids (TDS)</b>                        | mg/l        | IS: 3025 (Part-16): 2023   | 402.2     | 10 - 5000                               | 500   | 2000          |
| 6                                  | <b>Ammonia (as total ammonia-N)</b>                        | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 4500-NH <sub>3</sub> F              | <0.5      | 0.5 - 2.0                               | 0.5   | No Relaxation |
| 7                                  | <b>Anionic Detergents (as MBAS)</b>                        | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 5540 C                              | <0.05     | 0.05 - 0.5                              | 0.2   | 1.0           |
| 8                                  | <b>Calcium as Ca</b>                                       | mg/l        | IS: 3025 (Part-40): 1991<br>Reaffirmed: 2019                         | 52.8      | 2.0 - 600                               | 75  | 200           |
| 9                                  | <b>Magnesium as Mg</b>                                     | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3500 Mg, B                          | 29.16     | 0.1 - 200                               | 30  | 100           |
| 10                                 | <b>Chloride as Cl</b>                                      | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 4500-Cl <sup>-</sup> B              | 26.0      | 2.0 - 2000                              | 250   | 1000          |
| 11                                 | <b>Fluoride as F</b>                                       | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 4500 F <sup>-</sup> C               | 0.33      | 0.02 - 5.0                              | 1.0   | 1.5           |
| 12                                 | <b>Free Residual Chlorine</b>                              | mg/l        | IS: 3025 (Part-26): 1986<br>Reaffirmed: 2019                         | <0.1      | 0.1 - 5.0                               | 0.2   | 1.0           |
| 13                                 | <b>Nitrate as NO<sub>3</sub></b>                           | mg/l        | IS: 3025 (Part-34): 1986<br>Reaffirmed: 2019                         | <1.0      | 1.0 - 70                                | 45  | No Relaxation |
| 14                                 | <b>Phenolic Compound (as C<sub>6</sub>H<sub>5</sub>OH)</b> | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 5530 C                              | <0.001    | 0.001 - 0.005                           | 0.001   | 0.002         |
| 15                                 | <b>Sulphate as SO<sub>4</sub></b>                          | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 4500- SO <sub>4</sub> <sup>2-</sup> | 24.0      | 1.0 - 500                               | 200   | 400           |
| 16                                 | <b>Alkalinity as CaCO<sub>3</sub></b>                      | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 2320 B                              | 284.0     | 2.0 - 1000                              | 200   | 600           |
| 17                                 | <b>Total Hardness as CaCO<sub>3</sub></b>                  | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 2340 C                              | 252.0     | 5.0 - 800                               | 200   | 600           |
| 18                                 | <b>Aluminium as Al</b>                                     | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | <0.015    | 0.015 - 5.0                             | 0.03  | 0.2           |
| 19                                 | <b>Boron as B</b>  | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | <0.05     | 0.05 - 2.0                              | 0.5   | 1.0           |
| 20                                 | <b>Copper as Cu</b>  | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | <0.03     | 0.03 - 10                               | 0.05  | 1.5           |
| 21                                 | <b>Iron as Fe</b>  | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | 0.09      | 0.05 - 20                               | 0.3   | No Relaxation |
| 22                                 | <b>Manganese as Mn</b>                                     | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | 0.05      | 0.02 - 5.0                              | 0.1   | 0.3           |
| 23                                 | <b>Zinc as Zn</b>  | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | 0.42      | 0.05 - 15                               | 5   | 15            |
| 24                                 | <b>Cadmium as Cd</b>                                       | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | <0.003    | 0.003 - 2.0                             | 0.003   | No Relaxation |
| 25                                 | <b>Lead as Pb</b>  | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | <0.01     | 0.01 - 10                               | 0.01  | No Relaxation |
| 26                                 | <b>Mercury as Hg</b>                                       | µg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3112 B                              | <0.5      | 0.5 - 1000                              | 1.0   | No Relaxation |
| 27                                 | <b>Nickel as Ni</b>  | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | <0.02     | 0.02 - 5.0                              | 0.02  | No Relaxation |
| 28                                 | <b>Arsenic as As</b>                                       | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | <0.02     | 0.02 - 2                                | 0.01  | 0.05          |
| 29                                 | <b>Total Chromium</b>                                      | mg/l        | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | <0.03     | 0.03 - 5.0                              | 0.05  | No Relaxation |
| <b>Microbiological Parameters</b>  |  |             |  |           |   |   |               |
| 30                                 | <b>E. coli</b>   | MPN/ 100 ml | IS: 1622 - 1981<br>Reaffirmed: 2019                                  | Absent    | ≥ 2 MPN Present or<br>Absent per 100 ml | Shall not be detected in any<br>100 ml sample |               |
| 31                                 | <b>T. coli</b>   | MPN/ 100 ml | IS: 1622 - 1981<br>Reaffirmed: 2019                                  | Absent    | ≥ 2 MPN Present or<br>Absent per 100 ml | Shall not be detected in any<br>100 ml sample |               |

### **3.4 SOIL MONITORING**

#### **3.4.1 Soil Monitoring Locations**

The objective of the soil monitoring is to identify the impacts of ongoing project activities on soil quality and also predict impacts, which have arisen due to execution of various industrial activities. Accordingly, a study of assessment of the soil quality has been carried out.

To assess impacts of ongoing project activities on the soil in the area, the Physico-chemical characteristics of soils were examined by obtaining soil samples from selected points and analysis of the same. Single sample of soil was collected from the project site for studying soil characteristics, the location of which is listed in **Table-3.18**.

**Table-3.18: Details of Soil Monitoring Stations**

| <b>Sr. No.</b> | <b>Location Code</b> | <b>Location name and description</b> |
|----------------|----------------------|--------------------------------------|
| 1.             | SQ - 01              | Plant Premises                       |

#### **3.4.2 Methodology of Soil Monitoring**

The sampling has been done in line with IS: 2720 & Methods of Soil Analysis, Part-1<sup>st</sup>, 2<sup>nd</sup> Edition, 1986 of American Society for Agronomy and Soil Science Society of America. The homogenized samples were analyzed for physical and chemical characteristics (physical, chemical and heavy metal concentrations). The soil samples were collected in the month of September on 20.09.2024.

The samples have been analyzed as per the established scientific methods for Physico-chemical parameters. The heavy metals have been analyzed by using Atomic Absorption Spectro-photometer.

#### **3.4.3 Soil Monitoring Results**

Single sample of soil is collected from the site to check the quality of soil of the study area. The Physico-chemical characteristics of the soil, as obtained from the analysis of the soil sample, are presented in **Table-3.19**.

**Table-3.19: Physico-Chemical Characteristics of Soil at Plant Premises**

| <b>Sr. No.</b> | <b>Test Parameter</b>          | <b>Unit</b> | <b>Protocol/Test Method</b>                  | <b>Result</b> | <b>Range of testing /limit of detection</b> |
|----------------|--------------------------------|-------------|--|---------------|---|
| 1              | <b>pH</b>                      | -           | IS: 2720 (Part-26): 1987<br>Reaffirmed: 2021 | <b>7.4</b>    | 1 - 14                                      |
| 2              | <b>Electrical Conductivity</b> | µmhos/cm    | IS: 14767: 2000<br>Reaffirmed: 2021          | <b>314.0</b>  | 1.0 - 40000                                 |
| 3              | <b>Moisture content</b>        | %           | IS: 2720 (Part -2): 1973<br>Reaffirmed: 2020 | <b>2.98</b>   | 1.0 - 50                                    |
| 4              | <b>Sulphur</b>                 | Kg/Hec      | IS: 14685: 1999<br>Reaffirmed: 2019          | <b>13.26</b>  | 5.0 - 100                                   |
| 5              | <b>Boron</b>                   | mg/kg       | Method Manual of Soil Testing in India       | <b>BDL</b>    | 1.0 - 100                                   |
| 6              | <b>Copper</b>                  | mg/kg       | Method Manual of Soil Testing in India       | <b>0.33</b>   | 0.3 - 500                                   |
| 7              | <b>Zinc as Zn</b>              | mg/kg       | Method Manual of Soil Testing in India       | <b>16.82</b>  | 1.0 - 500                                   |
| 8              | <b>Iron as Fe</b>              | mg/kg       | Method Manual of Soil Testing in India       | <b>118.4</b>  | 5.0 - 500                                   |
| 9              | <b>Manganese as Mn</b>         | mg/kg       | Method Manual of Soil Testing in India       | <b>8.26</b>   | 5.0 - 500                                   |

#### **3.4.4 Discussion on Soil Characteristics in the Study Area**

The soil in study area is characterized by moderate organic content. The soil quality in the project area has not been affected by the project activities



## Uttar Pradesh Pollution Control Board

Building. No TC-12V Vibhuti Khand, Gomti Nagar, Lucknow-226010

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185964/UPPCB/Bareilly(UPPCBRO)/CTO/both/BAREILLY/2023

Date: 19/06/2023

To,

M/s

**DHAMPUR BIO ORGANICS LIMITED UNIT MEERGANJ DIVISION SUGAR**

**VILLAGE NAGARIA SADAT, BLOCK TEHSIL. MEERGANJ,  
DISTRICT BAREILLY (UTTAR PRADESH).,BAREILLY,**

Application Id-  
**21519047**

Consolidated Consent to Operate and Authorisation hereinafter referred to as the CCA (Consolidated Consent & authorization) (Fresh) under Section-25 of the Water (Prevention & Control of Pollution) Act, 1974 and under Section-21 of the Air (Prevention & Control of Pollution) Act, 1981 and Authorization under Rule-6(2) of the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 notified under Environment (Protection) Act, 1986 as applicable (to be referred hereinafter as Water Act, Air Act and HW Rules respectively).

CCA is hereby granted to **DHAMPUR BIO ORGANICS LIMITED UNIT MEERGANJ DIVISION SUGAR** located at **VILLAGE NAGARIA SADAT, BLOCK TEHSIL. MEERGANJ, DISTRICT BAREILLY (UTTAR PRADESH).,BAREILLY,** subject to the provisions of **the Water Act, Air Act and Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016** and the orders that may be made further and subject to following terms and conditions :-

1. This CCA DHAMPUR BIO ORGANICS LIMITED UNIT MEERGANJ DIVISION SUGAR granted for the period from **19/06/2023 to 31/12/2024** and valid for manufacturing of following products.

| S No | Product                   | Quantity | Unit              |
|------|---------------------------|----------|-------------------|
| 1    | Sugar Cane Crushing       | 9000     | Metric Tonnes/Day |
| 2    | Co-Generation Power Plant | 22.5     | Megawatt          |

### 2. Conditions under Water(Prevention and Control of Pollution) Act -1974 as amended :-

(i) The daily quantity of effluent discharge (KLD) :-

| Kind of Effluent | Quantity(KLD)   | Treatment facility | Discharge point |
|------------------|---|--------------------|-----------------|
| Domestic         | <b>50 KLD</b>   | STP                |                 |
| Industrial       | <b>Industrial effluent quantity shall be restricted to 900 KLD and Cooling Tower blow down shall be restricted to 900 KLD, only one outlet is allowed</b> | ETP                |                 |

(ii) Trade Effluent Treatment and Disposal :-The applicant shall operate Effluent Treatment Plant consisting of primary/secondary and tertiary treatment as is required with reference to influent quantity and quality.

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

(iii) The treated effluent shall be recycled to the maximum extent and should be reused within the premises for gardening etc. Quality of the treated effluent shall meet to the following general and specific standards as prescribed under Environment (Protection) Rules, 1986 and applicable to the unit from time-to-time :-

### **Industrial Effluent Quality Standard**

| S.No. | Parameter              | Standard   |
|-------|------------------------|--|
| 1     | Total Suspended Solids | 100mg/l (for discharge in on land for irrigation), 30mg/l (for discharge in surface water body)  |
| 2     | BOD                    | 100mg/l (for discharge in on land for irrigation), 30mg/l (for discharge in surface water body)  |
| 3     | COD                    | 250mg/l  |
| 4     | Oil & Grease           | 10mg/l   |
| 5     | Quantity of Discharge  | Industrial effluent quantity shall be restricted to 900 KLD and Cooling Tower blow down shall be restricted to 900 KLD, only one outlet is allowed |

(iv) Sewage Treatment and Disposal :- The applicant shall provide comprehensive STP as is required with reference to influent quantity and quality. In case of stoppage of functioning of STP, production has to be stopped immediately and this Board has to be intimated by fax/phone/email with a report in this regard to be dispatched immediately.

(v) The treated sewage shall be reused in gardening as far as possible. The STP shall be maintained continuously so as to achieve the quality of the treated sewage to the following standards.

| S No. | Parameters | Standards |
|-------|------------|-----------|
| 1     | BOD (mg/L) | 30mg/l    |
| 2     | TSS (mg/L) | 100mg/l   |

### **3. Conditions under Air (Prevention and Control of Pollution) Act -1981 as amended :-**

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

### **Air Pollution Source Details**

| S No. | Air Pollution Source | Type of fuel | Stack no | Control Device | Height of Stack |
|-------|----------------------|--------------|----------|----------------|-----------------|
|       |                      |              |          |                |                 |

|   |                              |                   |   |                    |   |
|---|------------------------------|-------------------|---|--------------------|---|
| 1 | Boilers of 80 TPH and 55 TPH | Bagasse 15 60 TPD | 1 | Particulate Matter | The boilers are equipped with individual wet scrubber and common stack height of 50 meter from ground level |
| 2 | DG sets 625 KVA and 625 KVA  | Diesel            | 2 | Particulate Matter | Stack Height of 5 meter and 5 meter above the roof of nearest building                                      |

### Emmission Quality Standards

| S No. | Stack no | Parameters         | Standards             |
|-------|----------|--------------------|-----------------------|
| 1     | 1        | Particulate Matter | 150mg/Nm3             |
| 2     | 2        | Particulate Matter | As per E(P)Rules 1986 |

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

(ii) The unit will not use any type of restricted fuel.

(iii) Noise from the D.G. Set and other source(s) should be controlled by providing an acoustic enclosure as is required for meeting the ambient noise standards for night and day time as prescribed for respective areas/zones (Industrial, Commercial, Residential, Silence) which are as follows :-

Day time : from 6.00 a.m. to 10.00 p.m., Night time: from 10.00 p.m. to 6.00 a.m.

| Standards for Noise level in db(A) Leq | Industrial Area |            | Commercial Area |            | Residential Area |            | Silence Zone |            |
|--|-----------------|------------|-----------------|------------|------------------|------------|--------------|------------|
|  | Day Time        | Night Time | Day Time        | Night Time | Day Time         | Night Time | Day Time     | Night Time |
|  | 75              | 70         | 65              | 55         | 55               | 45         | 50           | 40         |

### 4. Conditions under Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 :-

The Factory Manager of M/s DHAMPUR BIO ORGANICS LIMITED UNIT MEERGANJ DIVISION SUGAR . is hereby granted an authorization to operate a facility for collection and storage of Hazardous wastes. The authorization is granted to operate a facility for generation, collection and storage of hazardous wastes within factory premises for following category of wastes:-

| S.No. | Category of Hazardous Waste as per the Schedules I, II and III of these rules | Authorised mode of disposal or recycling or utilisation or co-processing, etc. | Quantity(ton/annum) |
|-------|---|--|---------------------|
| 1     | Used or Spent Oil (Schedule I, Cat. 5.1)                                      | TSDF/Authorized Recyclers  | 1.5 MT per year     |
| 2     | Cotton Rags (Schedule I, Cat. 33.2)   | TSDF   | 1.0 MT per year     |

|          |  |             |                        |
|----------|--|-------------|------------------------|
| <b>3</b> | <b>Empty<br/>Containers/drum<br/>(Schedule I, Cat. 33.1)</b> | <b>TSDF</b> | <b>5.0 MT per year</b> |
|----------|--|-------------|------------------------|

**The authorization shall be in force and shall be valid upto 31/12/2024.** The authorization is subject to the conditions stated below and such conditions as may be specified in the rules for the time being in force under Environment (Protection) Act, 1986.

**Terms and conditions of Hazardous Waste authorization :-**

- (i) The authorization shall comply with the provisions of the Environment (Protection) Act, 1986, and the rules made there under.
- (ii) The authorization and its renewal shall be produced for inspection at the request of an officer authorized by the SPCB.
- (iii) The person authorized shall not rent, lend, sell, transfer or otherwise transport the hazardous wastes without obtaining prior permission of the SPCB.
- (iv) Any unauthorized changes in personnel, equipment as working conditions as mentioned in the application by the person authorized shall constitute a breach of his authorization.
- (v) It is the duty of the authorized person to take prior permission of the SPCB to close down the facility.
- (vi) An application for the renewal of an authorization shall be made as laid down under these rules.
- (vii) The unit shall comply with any other conditions specified in the guidelines issued by the MoEF or CPCB/SPCB from time to time.
- (viii) The authorization is valid for temporary storage of Hazardous Waste within premises only.
- (ix) The authorized agency shall ensure that on-line data with regard to quantity and nature of hazardous chemicals being used in the plant as well as air emission and waste generated within premises is displayed on Display Board of size 6x4 feet outside the main factory gate within premises
- (x) It is duty of the authorized person to take prior permission of this Board to close and cleanup the facility for treatment, storage and disposal of hazardous waste.
- (xi) The applicant shall maintain record of hazardous waste in Form-3 and shall submit annual return in Form-4 on or before the 30th day of June following to the financial year to which that return relates.
- (xii) In no case any hazardous waste shall be disposed off on land, in any drain, or into any water stream. All spillage must also be safely collected and stored.
- (xiii) Before the hazardous waste is stored or dumped in the facility, applicant must conduct a detailed physical and chemical analysis of hazardous waste sample and report to the Board.
- (xiv) Dried hazardous sludge from the process in the plant shall be stored in double lined HDPE pit constructed with R.C.C. or such material which does not react with the waste contained in it.
- (xv) The storage area should be fenced properly and Sign/Notice Board indicating 'Danger' and 'Hazardous' shall be displayed at appropriate position both in Hindi and English.
- (xvi) The industry shall store non-ferrous metal waste, used oil/spent oil waste in sealed drums placed on impervious floor under covered shed. Hazardous waste if required shall be sold only to Registered Recyclers/Re-processors.
- (xvii) In case of any transportation of hazardous waste, the details in Form-10 of the Hazardous and Other Wastes Rules, 2016 shall be submitted to the Board.

**5. Essential documents to be submitted by the Industry/Unit as Applicable:-**

- (i) Annual return in Form-4 and Waste Disposal Manifest in Form-10 under Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and Third Party Audit Report.
- (ii) Environment Statement in Form-V of Environment (Protection) Rules, 1986.
- (iii) Quarterly compliance report of the CCA, photograph of ETP/APCs/Waste Storage Area.

6. Competent Authority reserves the right to change/modify/add any time any condition of this CCA.

7. Unit has to comply with the following specific & general conditions. Non compliance of any provision of this CCA and provisions of the Water Act, Air Act and Hazardous and Other Wastes (Management and

Transboundary Movement) Rules, 2016 will result in legal action under the aforesaid Acts and Rules.

8. In compliance to the G.O 1011/81-7-2021-09 (Writ)/2016 dated 13.10.2021 issued by Department of Environment, Forest and Climate Change, Uttar Pradesh. You are directed to develop Miyawaki Forest as per the SOP available at URL:-<http://www.upecp.in/TrainingSession.aspx> for ensuring timely compliance of this direction, you are hereby directed to submit a bank guarantee with minimum validity of one year of the amount equivalent to the sum of initial consent fees (Air and Water) or Rs. 50,000/- (Rs. Fifty Thousand Only) whichever is more, within 30 days from the date of issuance of this certificate. In case of non-compliance of this direction, your consent will be revoked by the Board.

9. If the unit uses the ground water and requires the permission from SGWA/CGWA for water abstraction then the industry will have to obtain No objection certificate for abstraction of ground water. It will be the responsibility of the industry to comply with the various conditions of the NOC obtained from the competent authority and submit to the Board, within 3 months time failing which CTO will be revoked.

#### **General Conditions:-**

1. The applicant shall get analysed the samples of effluent/emission/hazardous wastes at least once in a three month from the laboratory recognized by the MoEF and shall report to the UPPCB.
2. The applicant shall however, not without the prior consent of the Board bring into use any new or altered outlet for the discharge of effluent or gases emission or sewage waste from the unit.
3. Treated Industrial waste water and domestic waste water shall be disposed jointly at one disposal point. The applicant shall provide discharge measurement equipment at final disposal point.
4. The applicant shall strictly comply with conditions of this CCA and submit compliance report of stipulated conditions within 30 days of receipt of this CCA. If at any point of time, it is found that the industry is not complying with stipulated conditions or any further direction/instruction issued by the Board, legal action shall be initiated against the applicant.
5. The applicant shall maintain good house keeping. All valves/pipes/sewer/drains etc. must be leak-proof
6. The industry shall provide uninterrupted entry to the STP/ETP inlet and outlet points, Air Pollution Control equipment and stack for smooth sampling/monitoring of efficiency of pollution control systems.
7. The industry shall provide Inspection Book at the time of inspection to the Board's officials.
8. Whenever due to any accident or other unforeseen act or event, such emission occurs or is apprehended to occur in excess of standards laid down, such information shall be reported to the Board's offices and all other concerned offices. In case of failure of pollution control equipment, the production process connected to it shall be stopped with immediate effect.
9. The industry shall operate in a manner so that all emissions be emitted through designated chimney/stack only.
10. In case of any damage to the agriculture productivity, human habitation etc. by the operation of industry, it shall be imperative to stop production in the industry with immediate effect and such information shall be reported to Board's offices. The industry shall be liable to pay compensation also in such cases as decided by the Competent Authority.
11. The applicant shall apply before the 60 days of expiry of CCA or any change in production types/production capacity/manufacturing process/capacity enhancement etc. or any change in effluent discharge point or emission point
12. The Board reserves the right to revoke/add/modify any stipulated condition issued along with CCA, as may be necessary.

#### **Specific Conditions:-**

- 1- The earlier Consent To Operate issued by UPPCB vide letter number 142421/UPPCB/Bareilly(UPPCBRO)/CTO/water/ BAREILLY/2021 dated 31.12.2021 issued under Water (Prevention and Control of Pollution) Act 1974 and vide number

142806/UPPCB/Bareilly(UPPCBRO)/CTO/air/BAREILLY/2021 dated 31.12.2021 issued under Air (Prevention and Control of Pollution) Act 1981 with validity 31.12.2023 is hereby revoked

2- This Consent to Operate Water is valid for production Sugar at cane crushing capacity of 9000 TCD and 22.5 MW co-generation power plant.

3- Unit shall install STP for Domestic effluent 50 KLD capacity for disposal of domestic effluent by the industry.

4- Industrial effluent quantity shall be restricted to 900 KLD and Cooling Tower blow down shall be restricted to 900 KLD, only one outlet is allowed in compliance of notification no G.S.R.35(E) dated 15.01.2016 of MoEF&CC.

5- The discharge norms must conform to the norms prescribed in notification no G.S.R. 35 (E) dated 14.01.2016 of MoEF&CC.

6- Unit shall identify recipient drains/ rivulets and their u/s & d/s location in consultation with UPPCB and shall carry out monthly monitoring of identified recipient drains at u/s & d/s location through lab recognized under Environment (Protection) Act, 1986 and shall submit the analysis report on monthly basis by 10th of every month to CPCB and UPPCB.

7- Unit shall install sealed electromagnetic flow meter at water source with running hours and maintain the records of water extracted and treated effluent supplied to irrigation or discharge in drain.

8- Unit shall maintain pipe line from outlet of ETP and to the point of irrigation land.

9- Unit shall operate and maintain the APCS i.e. Wet Scrubber and common stack height of 50 meter from ground level at the boiler of 80 TPH and 55 TPH.

10- 02 DG sets of 625 KVA and 625 KVA are equipped with canopy and stack height shall be 5 meter and 5 meter above from the roof of nearest building.

11- Unit shall operate and maintain the installed Online Emission Monitoring System at the stack of air polluting sources and ensure the connectivity with the servers of CPCB and UPPCB.

12- Fly ash shall be stored separately as per CPCB guidelines so that it should not adversely affect the air quality, becoming air borne by wind or water regime during rainy season by flowing along with storm water. Direct exposure of workers to fly ash & dust shall be avoided.

13- Unit shall ensure compliance of the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016.

14- Unit shall comply with the provisions of Rule 19 of the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and send copy of Form 10 regarding Manifest for Hazardous and Other Wastes.

15- Unit shall comply with the provisions of Rule 20 of The Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and submit Annual Returns to State Board in Form IV.

16- Unit shall submit treated effluent monitoring report of the ETP and ground water quality of premises as well as of the irrigated area done by MoEF& CC approved laboratory in every 3 months.

17- Unit shall ensure the connectivity of the installed online monitoring system to the servers of CPCB and UPPCB.

18- Unit shall provide Pakka channel/ pipe line for irrigation and shall maintain the records of ground water extracted and treated effluent used for irrigation on land.

19- Unit shall develop Green Belt in minimum 33 percent area of Industrial Premises as per the provisions laid down in office order no. H16405/220/2018/02 dated 16-02-2018 of U.P. Pollution Control Board. The copy of said office order is available on the website of U.P. Pollution Control Board [www.uppcb.com](http://www.uppcb.com).

20- Unit shall comply the provisions of Water (Prevention and Control of Pollution) Act 1974 as Amended, Air (Prevention and Control of Pollution) Act 1981 as Amended and Environment (Protection) Act 1986, and direction issued by Hon'ble National Green Tribunal, New Delhi in Order dated 13.07.2017 in OA no. 200/2014, M.C. Mehta v/s Union of India.

21- Unit shall submit treated effluent monitoring report of the ETP and ground water quality of premises as

wel as of the irrigated area done by MoEF& CC approved laboratory in every 3 months.

22- This Consent order shall automatically become invalid on issuance of Closure Order by C.P.C.B / UPPCB and further on Revoking of Closure order, the Consent order shall become valid.

VIVEK  
ROY

Digitally signed  
by VIVEK ROY  
Date:  
2023.06.22  
10:49:23 +05'30'

**Chief Environment Officer, Circle-7**

Copy to:

Regional Office, Uttar Pradesh Pollution Control Board, Bareilly

VIVEK  
ROY

Digitally signed  
by VIVEK ROY  
Date:  
2023.06.22  
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**Chief Environment Officer, Circle-7**



## मिशन LiFE - पर्यावरण के लिए जीवन शैली (Lifestyle For Environment ) जनसहभागिता का सन्देश



- स्वच्छता – देशसेवा में अपने परिवेश की स्वच्छता हेतु अपना सक्रिय योगदान सुनिश्चित करें
- संकल्प लें - एकल उपयोग प्लास्टिक उत्पाद जैसे कप, तश्तरी, चम्मच, स्ट्रॉ, ईयरबड्स आदि का उपयोग न हो एवं पर्यावरण अनुकूल विकल्पों जैसे कागज/पत्तों से बने दोने या कटलरी को प्राथमिकता दी जाय ।
- एकल उपयोग प्लास्टिक उत्पाद के प्रयोग को रोकने एवं प्लास्टिक बैग के बजाय कपड़े के थैले का उपयोग करने मात्र से 375 मिलियन टन ठोस (प्लास्टिक) कचरे का उत्सर्जन बचाया जा सकता है
- चक्रीय अर्थव्यवस्था (सर्कुलर इकोनॉमी) का समुचित कार्यान्वयन वर्ष 2030 तक लगभग 14 लाख करोड़ रुपये की अतिरिक्त बचत उत्पन्न कर सकता है | वेस्ट /अपशिष्ट फेकने के पूर्व सोचें, ये किसी का संसाधन तो नहीं ...?
- अनुपयोगी इलेक्ट्रिक / इलेक्ट्रॉनिक उत्पाद को कचरे में फेकने से रुकें | इसके उपयुक्त निस्तारण हेतु इसे प्राधिकृत ई-वेस्ट रीसाइक्लर को दें | प्राधिकृत ई-रीसाइकिंग इकाई में अनुपयोगी इलेक्ट्रिक / इलेक्ट्रॉनिक उत्पाद को देने मात्र से 0.75 मिलियन टन तक ई-कचरे का पुनर्चक्रण किया जा सकता है एवं ई-कचरे के विषम पर्यावरणीय दुष्प्रभाव से बचा जा सकता है
- बाहर जाते समय - सोचें कि क्या आपको वास्तव में परिवहन की आवश्यकता है - वह भी क्या व्यक्तिगत रूप से ? छोटी दूरी के लिए पैदल चलना पसंद करें, अथवा सम्भव हो तो कार पूल के रूप में संसाधन को साझा करें अथवा सार्वजनिक परिवहन पर विचार करें
- घरेलू स्तर पर कम से कम ठोस अपशिष्ट का उत्सर्जन करें और इनका प्र्याक्षीकरण करें
- उपयोगी शेष खाद्य सामग्री आपके स्वयं प्रयास अथवा निकटस्थ सक्रिय स्वयं सेवी संस्थाओं की सहायता से समाज के वंचित वर्ग तक पहुंचाई जा सकती है | वहीं अनुपयोगी भोजन /खाद्य सामग्री को कंपोस्ट (वर्मी कम्पोस्ट) करने से 15 अरब टन भोजन को नष्ट होने से बचाया जा सकता है
- ध्यान रखें - उपयुक्त नल और शावर के उपयोग से पानी की खपत को 30 - 40% तक कम किया जा सकता है। एवं उपयोग में न होने पर नलों को बंद रखने मात्र से 9 ट्रिलियन लीटर पानी बचाया जा सकता है
- ट्रैफिक लाइट/रेलवे क्रॉसिंग पर कार/स्कूटर के इंजन बंद करने मात्र से 22.5 विलियन kWh तक ऊर्जा की बचत हो सकती है
- परम्परागत बल्ब के स्थान पर CFL का उपयोग विजली की खपत में प्रभावी कमी लाते हैं | उपयोग में न होने पर विजली उपकरणों को बंद करें | स्टार रेटेड विद्युत उपकरणों के उपयोग को प्राथमिकता दें

हमारे द्वारा अपनी जीवन शैली की प्राथमिकताओं का उचित और पर्यावरण अनुकूल पुनर्निर्धारण समाज और पर्यावरण के प्रति हमारा दायित्व है।

# PARIVESH

(*Pro-Active and Responsive Facilitation by Interactive, and Virtuous Environmental Single-Window Hub*)

ENVIRONMENTAL  
CLEARANCE



## Government of India Ministry of Environment, Forest and Climate Change (Issued by the State Environment Impact Assessment Authority(SEIAA), UTTAR PRADESH)

To,

The A.V.P.(Business Compliance)  
DHAMPUR SUGAR MILLS LIMITED  
Dhampur Sugar Mills Limited  
Village : Nagaria Sadat, Block & Tehsil : Meerganj, District: Bareilly, U.P. - 243504

**Subject:** Grant of Environmental Clearance (EC) to the proposed Project Activity under the provision of EIA Notification 2006-regarding

Sir/Madam,

This is in reference to your application for Environmental Clearance (EC) in respect of project submitted to the SEIAA vide proposal number SIA/UP/IND2/408659/2022 dated 30 Nov 2022. The particulars of the environmental clearance granted to the project are as below.

|  |   |
|--|---|
| 1. EC Identification No.                   | <b>EC23B025UP120189</b>   |
| 2. File No.                                | 7410-6909   |
| 3. Project Type                            | Expansion   |
| 4. Category                                | B   |
| 5. Project/Activity including Schedule No. | 5(j) Sugar Industry   |
| 6. 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 DSM Sugar, Meerganj (A Unit of Dhampur Sugar Mills Limited), Sugar Division |
| 7. Name of Company/Organization            | DHAMPUR SUGAR MILLS LIMITED   |
| 8. Location of Project                     | UTTAR PRADESH   |
| 9. TOR Date                                | N/A   |

The project details along with terms and conditions are appended herewith from page no 2 onwards.

Date: 27/03/2023

(e-signed)  
Member Secretary  
Member Secretary  
SEIAA - (UTTAR PRADESH)

*Note: A valid environmental clearance shall be one that has EC identification number & E-Sign generated from PARIVESH. Please quote identification number in all future correspondence.*

*This is a computer generated cover page.*



## State Level Environment Impact Assessment Authority, Uttar Pradesh

### **Directorate of Environment, U.P.**

Vineet Khand-1, Gomti Nagar, Lucknow- 226010  
E-Mail- doeuplko@yahoo.com, seiaau@ yahoo.com  
Phone no- 0522-2300541

**Reference- MoEFCC Proposal no- SIA/UP/IND2/408659/2022 & SEIAA, U.P File no-7410-6909**

**Sub: Environmental Clearance for 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, U.P., M/s DSM Sugar, Meerganj.**

Dear Sir,

This is with reference to your application / letter dated 01-02-2022, 30-11-2022, 21-12-2022 on above mentioned subject. The matter was considered by 713<sup>th</sup> SEAC in meeting held on 23-12-2022 and 697<sup>th</sup> SEIAA in meeting held on 22-02-2023.

A presentation was made by the project proponent along with their consultant M/s Environmental & Technical Research Centre to SEAC on 23-12-2022.

### **Project Details Informed by the Project Proponent and their Consultant**

The project proponent, through the documents and presentation gave following details about their project –

1. The environmental clearances are sought for 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, U.P., M/s DSM Sugar, Meerganj.
2. The standard terms of reference in the matter were issued through online parivesh portal on 08/02/2022.
3. The Public hearing was organized by Uttar Pradesh State Pollution Control Board under the Chairmanship of Additional District Magistrate (Finance), Bareilly. Final EIA report submitted by project proponent on 30/11/2022.
4. Salient features of the project:

| Sr. No | Particulars                | Details  |                    |                 |  |
|--------|----------------------------|--|--------------------|-----------------|--|
|        |                            | Existing   | Proposed expansion | After Expansion |  |
| 1.     | Nature and Size of Project | 5000 TCD   | 6000 TCD           | 11000 TCD       |  |
| 2.     | Category of the Project    | As per EIA Notification dated 14 <sup>th</sup> Sep., 2006 as amended from time to time; the project falls in Category 'B', Project or Activity - 5(J). |                    |                 |  |
| 3.     | Locations Details          |  |                    |                 |  |
|        | Village/City               | Nagaria Sadat  |                    |                 |  |
|        | Block                      | Meerganj   |                    |                 |  |
|        | Tehsil                     | Meerganj   |                    |                 |  |
|        | District                   | Bareilly   |                    |                 |  |
|        | State                      | Uttar Pradesh  |                    |                 |  |
|        | Latitude                   | 28°33'1.70"N   |                    |                 |  |
|        | Longitude                  | 79°12'58.75"E  |                    |                 |  |
|        | Toposheet No               | 53P/2, 53P/3, 53P/6 & 53P/7  |                    |                 |  |

|    |   |   |                                      |  |  |
|----|---|---|--------------------------------------|--|--|
| 4. | Area Details  |   |                                      |  |  |
|    | Total Plant Area  | Existing Industry: 55.8466 Hectare<br>Proposed Expansion: Nil<br>No change in the area of industry, expansion will be done within existing premises.                                      |                                      |  |  |
|    | Greenbelt / Plantation Area   | ~33% of the project area has been provided as green belt. Same will be maintained after expansion also.   |                                      |  |  |
| 5. | Environmental Setting Details (with approximate aerial distance & direction from plant site)  |   |                                      |  |  |
|    | Nearest Village   | Serau Dharampur – Village Nagaria Sadat – 0.50 km in West direction,<br>Village Jatan – 0.70 km in SES direction.   |                                      |  |  |
|    | Nearest Town & City   | Tehsil & Block – Mirganj – 1.30 km in South-West direction.   |                                      |  |  |
|    | Nearest National Highway / State Highway  | NH 24 – 0.80 Km in South-West direction   |                                      |  |  |
|    | Nearest Railway station   | Nagaria Sadat Railway Station – 0.60 km in West direction   |                                      |  |  |
|    | Nearest Airport   | Hindon Airport - 181.32 km in West direction.<br>Indira Gandhi International Airport - 208.88 km in West direction.   |                                      |  |  |
|    | National Parks, Reserved Forests (RF)/ Protected Forests (PF), Wildlife Sanctuaries, Biosphere Reserves, Tiger/ Elephant Reserves, Wildlife Corridors etc. within 10 km radius          | No National Park, Wild Life Sanctuary, Biosphere Reserve, Tiger / Elephant Reserve, Wildlife Corridors Protected Forests (PF) etc. falls within 10 km radius of the plant site.           |                                      |  |  |
| 6. | River / Water Body (within 10 km radius)  |   |                                      |  |  |
|    | River: Nahal Nadi - 1.29 km in NWN direction<br>Dhakra Nadi - 2.67 km in East direction<br>Bahgul Nadi - 7.11 km in East-South direction<br>Ramganga River - 9.96 km in South direction |   |                                      |  |  |
|    | Cost Details  |   |                                      |  |  |
|    | Total Project Cost  | Rs 25000.0 Lakhs  |                                      |  |  |
| 7. | Cost for Environment Management Plan  | Capital Cost: Rs 4.79 Crores<br>Recurring Cost: Rs 1.12 Crores /Annum   |                                      |  |  |
|    | Basic Requirements for the project  |   |                                      |  |  |
|    | Water Requirement   | Existing  | After Proposed expansion             |  |  |
|    | Industrial (Fresh Water)  | 760 KLD (@ 0.16 KL/T of cane crush)   | 1710 KLD (@ 0.16 KL/T of cane crush) |  |  |
|    | Domestic (Fresh Water)  | 40.0 KLD  | 50.0 KLD                             |  |  |
|    | Total Fresh Water requirement   | 800 KLD   | 1760 KLD                             |  |  |
|    | Source of Fresh Water   | Ground water through Tube / Bore well. NOC from UPGWD has been obtained. For Additional water, Industry will be obtained the necessary permission before start of production work.        |                                      |  |  |
|    | Power Requirement   | Existing power requirement – 9.0 MW,<br>After proposed expansion: 13.5 MW,  |                                      |  |  |
|    | Man Power Requirement   | Nil for proposed expansion, existing employees are capable of running the complete plant after expansion also. Indirect employment: 100 nos will be expected to increase after expansion. |                                      |  |  |
| 8. | Product Details   | Existing  | After Proposed Expansion             |  |  |
| a  | Sugar   | 600 MT/Day  | 1320 MT/Day                          |  |  |

|     |                            |  |                    |
|-----|----------------------------|--|--------------------|
| b   | Molasses (Byproduct)       | 225 MT/Day   | 450 MT/Day         |
| c   | Bagasse (By product)       | 1176 MT/Day  | 3080 MT/Day        |
| d   | Press Mud (By Product)     | 200 MT/Day   | 440 MT/Day         |
| 9.  | Fuel and Its Quantity      | Bagasse is being and will be used as fuel.<br>Existing requirement: 1100 TPD<br>After proposed expansion: 2740 TPD |                    |
| 10. | Steam requirement          | Existing: 98 TPH<br>After proposed expansion: 187 TPH  |                    |
| 11. | Raw Material               |  |                    |
|     |                            | Existing   | Proposed expansion |
|     | Sugar Cane Crushing        | 5000 TCD   | 6000 TCD           |
| 12. | Rain water harvesting pits | 07 nos.  |                    |

5. Land use details:

| Sr. No.     | Land Use                          | Area in Sqm | Area in Percentage |
|-------------|-----------------------------------|-------------|--------------------|
| 1           | Roof Top (Building, Covered Shed) | 26500.0     | 4.74 %             |
| 2           | Green Belt                        | 184295.0    | 33 %               |
| 3           | Road and Paved                    | 20244.0     | 3.62 %             |
| 4           | Open Area                         | 327427.0    | 58.62 %            |
| Grand Total |                                   | 558466.0    | 100 %              |

6. Products and by product details:

| Product and its Quantity | Existing                     | After Expansion               |
|--------------------------|------------------------------|-------------------------------|
|                          | Sugar Cane 5000 TCD Crushing | Sugar Cane 11000 TCD Crushing |
| Sugar (Product)          | 600 MT/Day                   | 1320 MT/Day                   |
| Molasses (By Product)    | 225 MT/Day                   | 450 MT/Day                    |
| Bagasse (By Product)     | 1176 MT/Day                  | 3080 MT/Day                   |
| Press Mud (By Product)   | 200 MT/Day                   | 440 MT/Day                    |

7. Raw material details:

| Sr. No. | Particulars | Existing | Proposed Expansion | Total after expansion | Source of the raw material & mode of transportations |
|---------|-------------|----------|--------------------|-----------------------|--|
| 1.      | Sugar Cane  | 5000 T   | 6000 T             | 11000 T               | From reserve area by tractor trolley/trucks          |

2. Chemicals

|    |              |        |        |        |   |
|----|--------------|--------|--------|--------|---|
| a. | Lime         | 10.0 T | 10.0 T | 20.0 T | Will be sourced from Lime Stone mines and transported by trucks                     |
| b. | Sulphur      | 3.0 T  | 3.0 T  | 6.0 T  | Will be sourced from local market and transported by trucks                         |
| c. | Caustic Soda | 0.25 T | 0.27 T | 0.52 T | Will be purchased from Caustic Soda Manufacturers and will be transported by trucks |
| d. | Common salt  | 1.0 T  | 1.2 T  | 2.2 T  | Will be sourced from Open Market.   |

8. Water requirement details:

| Sr. No. | Particulars         | Existing KLD | Proposed KLD | Total KLD | Source                            |
|---------|---------------------|--------------|--------------|-----------|-----------------------------------|
| 1       | Industrial (Season) | 760          | 950          | 1710      | Ground Water through Tube-well.   |
| AND     |                     |              |              |           | Industry obtained NOC from UPGWD. |
| 2       | Domestic water      | 40           | 10           | 50        |                                   |

|   |                        |  |      |      |  |
|---|------------------------|--|------|------|--|
|   | requirement            |  |      |      | For Additional water, industry will obtain the permission before the start of operation. |
|   | Grand Total            | 800  | 960  | 1760 |  |
| 3 | Waste Water generation | 1000   | 1200 | 2200 | Maximum effluent generation is being and will be @ 0.2 KL / Ton of Cane Crushed.         |
|   | Waste water treatment  | Existing treatment Strategy : Effluent is being treated through Activated sludge process. ETP comprises of Bar Screen, Oil & Grease trap, chemical Mixing, Equalization, Primary Clarifier, Aeration, Secondary Clarifier, MGF, ACF and Sludge Drying beds.<br>Treatment Strategy after expansion : Existing ETP capacity will be modified to 2500 KLD after expansion and Effluent will be treated through same treatment strategy as per existing. |      |      |  |

9. Industrial waste generation details:

| Name of Solid waste | Existing capacity | Total After Expansion | Management Plan   |
|---------------------|-------------------|-----------------------|---|
| Boiler ash          | 19.0 MT/Day       | 40.4 MT/Day           | Boiler ash is being / will be supplied to the brick manufacturer. |
| ETP Sludge          | 3.0 MT/Day        | 6.0 MT/Day            | ETP Sludge is being / will be given to the farmers.               |
| Press Mud           | 200 MT/Day        | 440 MT/Day            | Press mud is being / will be given to the farmers                 |

10. The project proposal falls under category-5(j) of EIA Notification, 2006 (as amended).

Based on the recommendations of the State Level Expert Appraisal Committee Meeting (SEAC) held on 23-12-2022 the State Level Environment Impact Assessment Authority (SEIAA) in its Meeting held 22-02-2023 and decided to grant of environmental clearance on the proposal as above alongwith standard environmental clearance conditions prescribed by MoEF&CC, GoI and following additional conditions:

**Specific Conditions:**

- I. Notification dated 14.01.2016 of Moef&CC regarding discharge of treated effluent shall be complied with.
- II. Directions/suggestions given during public hearing and commitment made by the project proponent should be strictly complied.
- III. Ash generated will be stored in dedicated areas with proper fencing.
- IV. The project proponent will install 3 CAAQMS in consultation with UPPCB.
- V. 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)
- VI. 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.
- VII. Greening and paving shall be implemented in the plant area to arrest soil erosion and dust pollution exposed soil surface.
- VIII. Properly covered vehicles shall be used while transporting material and product.
- IX. Allergy test should also be included in health checkup of works.
- X. Industry should comply with the CPCB charter guidelines for sugar units and treated water shall be used for the different purposes as per the requirement in industry.

XI. Industry shall comply in a time bound manner with the revised CCR plan submitted to the Directorate of Environment and submit the compliance progress time to time to the concerned authority.

**Standard environmental clearance conditions:**

*I. Statutory compliance:*

- I. The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1986, in case of the diversion of forest land for non-forest purpose involved in the project.
- II. The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.
- III. The project proponent shall prepare a Site-Specific Conservation Plan & Wildlife Management Plan and approved by the Chief Wildlife Warden, if applicable. The recommendations of the approved Site-Specific Conservation Plan / Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report. (in case of the presence of schedule-I species in the study area).
- IV. The project proponent shall obtain Consent to Establish / Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State pollution Control Board/ Committee.
- V. The project proponent shall obtain authorization under the Hazardous and other Waste Management Rules, 2016 as amended from time to time.
- VI. The Company shall strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989 as amended time to time. All transportation of Hazardous Chemicals shall be as per the Motor Vehicle Act (MVA), 1989.

*II. Air quality monitoring and preservation:*

- I. The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission with respect to standards prescribed in Environment (Protection) Rules 1986 and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- II. The project proponent shall install system carryout to Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM10 and PM2.5 in reference to PM emission, and SO2 and NOx in reference to SO2 and NOx emissions) within and outside the plant area at least at four locations (one within and three outside the plant area at an angle of 120° each), covering upwind and downwind directions.
- III. The project proponent shall submit monthly summary report of continuous stack emission and air quality monitoring and results of manual stack monitoring and manual monitoring of air quality /fugitive emissions to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.
- IV. Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.
- V. The National Ambient Air Quality Emission Standards issued by the Ministry vide

G.S.R. No. 826(E) dated 16th November, 2009 shall be complied with.

- VI. Sulphur content should not exceed 0.5% in the coal for use in coal fired boilers to control particulate emissions within permissible limits (as applicable). The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/SPCB guidelines.
- VII. The DG sets shall be equipped with suitable pollution control devices and the adequate stack height so that the emissions are in conformity with the extant regulations and the guidelines in this regard.
- VIII. Storage of raw materials, coal etc shall be either stored in silos or in covered areas to prevent dust pollution and other fugitive emissions.

**III. Water quality monitoring and preservation**

- I. 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 and connected to SPCB and CPCB online servers.
- II. Zero Liquid Discharge shall be ensured and no waste/treated water shall be discharged outside the premises.
- III. Process effluent /any wastewater shall not be allowed to mix with storm water. The storm water from the premises shall be collected and discharged through a separate conveyance system.
- IV. The effluent discharge shall conform to the standards prescribed under the Environment (Protection) Rules, 1986, or as specified by the State Pollution Control Board while granting Consent under the Air/Water Act, whichever is more stringent.
- V. Total fresh water requirement shall not exceed the proposed quantity or as specified by the Committee. Prior permission shall be obtained from the concerned regulatory authority/CGWA in this regard.
- VI. Industrial/trade effluent shall be segregated into High COD/TDS and Low COD/TDS effluent streams. High TDS/COD shall be passed through stripper followed by MEE and ATFD (agitated thin film drier). Low TDS effluent stream shall be treated in ETP and treated effluent shall conform to the standards prescribed under the Environment (Protection) Rules, 1986 and treated water from ETP shall be used for irrigation.
- VII. The Company shall harvest rainwater from the roof tops of the buildings and storm water drains to recharge the ground water and utilize the same for different industrial operations within the plant.

**IV. Noise monitoring and prevention**

- I. Acoustic enclosure shall be provided to DG set for controlling the noise pollution.
- II. The overall noise levels in and around the plant area shall be kept well within the standards by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation.
- III. The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time

**V. Energy Conservation measures**

- I. The energy sources for lighting purposes shall preferably be LED based.

**VI. Waste management**

- I. Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys etc. Flame arresters shall be provided on tank farm and the solvent transfer through pumps.
- II. Process organic residue and spent carbon, if any, shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt, if hazardous shall be disposed off

to the TSDF.

**III. The company shall undertake waste minimization measures wherever feasible as below :-**

- a. Metering and control of quantities of active ingredients to minimize waste .
- b. Reuse of by-products from the process as raw materials or as raw material substitutes in other processes.
- c. Use of automated filling to minimize spillage.
- d. Use of Close Feed system into batch reactors.
- e. Venting equipment through vapour recovery system.
- f. Use of high pressure hoses for equipment clearing to reduce wastewater generation

**VII. Green Belt**

- I. Green belt shall be developed in an area equal to 33% of the plant area with a native tree species in accordance with CPCB guidelines. The greenbelt shall inter alia cover the entire periphery of the plant.

**VIII. Safety, Public hearing and Human health issues**

- I. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
- II. The PP shall provide Personal Protection Equipment (PPE) as per the norms of Factory Act.
- III. Training shall be imparted to all employees on safety and health aspects of chemicals handling. Pre-employment and routine periodical medical examinations for all employees shall be undertaken on regular basis. Training to all employees on handling of chemicals shall be imparted.
- IV. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, creche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
- V. Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.
- VI. 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

**IX. Corporate Environment Responsibility**

- I. The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 1st May 2018, as applicable, regarding Corporate Environment Responsibility.
- II. The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements /deviation/violation of the environmental / forest /wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation/ violation of the environmental/ forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.
- III. A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive , who will directly to the head of the organization.
- IV. Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved

by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.

v. Self-environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.

x. *Miscellaneous*

- I. The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.
- II. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
- III. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
- IV. The project proponent shall monitor the criteria pollutants level namely; PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub> (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.
- V. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
- VI. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
- VII. The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.
- VIII. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
- IX. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.
- X. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).
- XI. Concealing factual data or submission of false /fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
- XII. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- XIII. The Ministry reserves the right to stipulate additional conditions if found necessary.
- XIV. The Company in a time bound manner shall implement these conditions.
- XV. The Regional Office of this Ministry shall monitor compliance of the stipulated

conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.

XVI. The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.

XVII. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

Concealing factual data and information or submission of false/fabricated data and failure to comply with any of the conditions stipulated in the Prior Environmental Clearance attract action under the provision of Environmental (Protection) Act, 1986.

This Environmental Clearance is subject to ownership of the site by the project proponents in confirmation with approved Master Plan for Bareilly. In case of violation; it would not be effective and would automatically be stand cancelled.

The project proponent has to ensure that the proposed site in not a part of any no-development zone as required/prescribed/identified under law. In case of the violation this permission shall automatically deemed to be cancelled. Also, in the event of any dispute on ownership or land use of the proposed site, this Clearance shall automatically deemed to be cancelled.

Further project proponent has to submit the regular 6 monthly compliance report regarding general & specific conditions as specified in the E.C. letter and comply the provision of EIA notification 2006 (as Amended).

These stipulations would be enforced among others under the provisions of Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, the Public Liability (Insurance) Act, 1991 and EIA Notification, 2006 including the amendments and rules made thereafter.

**Copy, through email, for information and necessary action to –**

1. Additional Chief Secretary, Department of Environment, Forest and Climate Change, Government of Uttar Pradesh, Lucknow (email – [psforest2015@gmail.com](mailto:psforest2015@gmail.com))
2. Joint Secretary, Ministry of Environment, Forest and Climate Change, Government of India, 3rd Floor, Prithvi-Block, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi-110003 (email – [sudheer.ch@gov.in](mailto:sudheer.ch@gov.in))
3. Deputy Director General of Forests (C), Integ rated Regional Office, Ministry of Environment, Forest and Climate Change, Kendriya Bhawan, 5th Floor, Sector "H", Aliganj, Lucknow – 226020 (email – [rocz.lko-mef@nic.in](mailto:rocz.lko-mef@nic.in))
4. District Magistrate Bareilly.
5. Member Secretary, Uttar Pradesh Pollution Control Board, TC-12V, Paryavaran Bhawan, Vibhuti Khand, Gomti Nagar, Lucknow-226010 (email – [ms@uppcb.com](mailto:ms@uppcb.com))
6. Copy to Web Master for uploading on PARIVESH Portal.
7. Copy for Guard File.

(Ajay Kumar Sharma)  
Member Secretary, SEIAA

Signature Not Verified

Digitally signed by Member  
Secretary

Member Secretary

Date: 3/27/2023 6:47:50 PM

Page 10 of 10



# ENVIRONMENTAL AND TECHNICAL RESEARCH CENTRE

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Email : ETRCLTH@YAHOO.IN, Web. : www.etrccindia.com

(ISO 9001:2015, ISO 45001:2018 (OH&S) ISO 14001:2015)

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/2404/13829/2024 | Date of Report: 24.04.2024  |
| Name /Address/Type of Industry            | M/s Dhampur Bio-organics Limited<br>Unit: Meerganj, Division: Sugar<br>Village: Nagari Sadat, Block & Tehsil: Meerganj<br>District: Bareilly (Uttar Pradesh) - 243504 |

### SAMPLE DETAILS

|   |                      |                |   |                     |               |
|---|----------------------|----------------|---|---------------------|---------------|
| 1 | Water/ Waste Water   | Ground Water   | 5 | Packing Condition   | Sealed        |
| 2 | Sample Description   | Borewell Water | 6 | Sample Collected By | Industry Self |
| 3 | Sample received date | 17.04.2024     | 7 | Analysis Start Date | 17.04.2024    |
| 4 | Sample Quantity      | 5.0 liters     | 8 | Analysis End Date   | 23.04.2024    |

### TEST RESULT

| Sr. No                             | Test Parameter  | Unit  | Protocol/Test Method   | Result    | Range of testing /limit of detection | Indian Standard 10500: 2012 |               |
|------------------------------------|---|-------|--|-----------|--------------------------------------|-----------------------------|---------------|
|                                    |   |       |  |           | Desirable                            | Permissible                 |               |
| <b>Physico-chemical Parameters</b> |   |       |  |           |                                      |                             |               |
| 1                                  | Colour  | Hazen | IS: 3025 (Part - 4): 2021  | <5.0      | 5 - 30                               | 5                           | 15            |
| 2                                  | Odour   | -     | IS: 3025 (Part - 05): 2018   | Agreeable | Qualitative                          | Agreeable                   | Agreeable     |
| 3                                  | pH  | -     | APHA 24 <sup>th</sup> Ed. 2023 - 4500 H <sup>+</sup>                 | 7.4       | 1 - 14                               | 6.5-8.5                     | No Relaxation |
| 4                                  | Turbidity   | NTU   | APHA 24 <sup>th</sup> Ed. 2023 - 2130 B                              | BDL       | 2 - 40                               | 1                           | 5             |
| 5                                  | Total Dissolved Solids (TDS)                            | mg/l  | IS: 3025 (Part - 16): 2023   | 396.4     | 10 - 5000                            | 500                         | 2000          |
| 6                                  | Ammonia (as total ammonia-N)                            | mg/l  | APHA 24 <sup>th</sup> Ed. 2023 - 4500-NH <sub>3</sub> F              | BDL       | 0.5 - 2.0                            | 0.5                         | No Relaxation |
| 7                                  | Anionic Detergents (as MBAS)                            | mg/l  | APHA 24 <sup>th</sup> Ed. 2023 - 5540 C                              | BDL       | 0.05 - 0.5                           | 0.2                         | 1.0           |
| 8                                  | Calcium as Ca   | mg/l  | IS: 3025 (Part - 40): 1991<br>Reaffirmed: 2019                       | 56.0      | 2.0 - 600                            | 75                          | 200           |
| 9                                  | Magnesium as Mg   | mg/l  | APHA 24 <sup>th</sup> Ed. 2023 - 3500 Mg, B                          | 29.16     | 0.1 - 400                            | 30                          | 100           |
| 10                                 | Chloride as Cl  | mg/l  | APHA 24 <sup>th</sup> Ed. 2023 - 4500-Cl <sup>-</sup> B              | 26.0      | 2.0 - 2000                           | 250                         | 1000          |
| 11                                 | Fluoride as F   | mg/l  | APHA 24 <sup>th</sup> Ed. 2023 - 4500 F <sup>-</sup> C               | 0.33      | 0.02 - 5.0                           | 1.0                         | 1.5           |
| 12                                 | Free Residual Chlorine                                  | mg/l  | IS: 3025 (Part - 26): 1986<br>Reaffirmed: 2019                       | BDL       | 0.1 - 5.0                            | 0.2                         | 1.0           |
| 13                                 | Nitrate as NO <sub>3</sub>                              | mg/l  | IS: 3025 (Part-34): 1986<br>Reaffirmed: 2019                         | BDL       | 1.0 - 70                             | 45                          | No Relaxation |
| 14                                 | Phenolic Compound (as C <sub>6</sub> H <sub>5</sub> OH) | mg/l  | APHA 24 <sup>th</sup> Ed. 2023 - 5530 C                              | BDL       | 0.001-0.005                          | 0.001                       | 0.002         |
| 15                                 | Sulphate as SO <sub>4</sub>                             | mg/l  | APHA 24 <sup>th</sup> Ed. 2023 - 4500- SO <sub>4</sub> <sup>2-</sup> | 26.0      | 1.0 - 500                            | 200                         | 400           |
| 16                                 | Alkalinity as CaCO <sub>3</sub>                         | mg/l  | APHA 24 <sup>th</sup> Ed. 2023 - 2320 B                              | 288.0     | 2.0 - 1000                           | 200                         | 600           |
| 17                                 | Total Hardness as CaCO <sub>3</sub>                     | mg/l  | APHA 24 <sup>th</sup> Ed. 2023 - 2340 C                              | 260.0     | 5.0 - 800                            | 200                         | 600           |
| 18                                 | Aluminium as Al   | mg/l  | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | BDL       | 0.015 - 5.0                          | 0.03                        | 0.2           |
| 19                                 | Boron as B  | mg/l  | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | BDL       | 0.05 - 2.0                           | 0.5                         | 1.0           |
| 20                                 | Copper as Cu  | mg/l  | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | BDL       | 0.03 - 10                            | 0.05                        | 1.5           |
| 21                                 | Iron as Fe  | mg/l  | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | 0.20      | 0.05 - 20                            | 0.3                         | No Relaxation |



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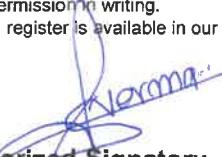
Test Report Ref No.: ETRC/2404/13829/2024

|                                   |                 |            |   |        |             |  |               |
|-----------------------------------|-----------------|------------|---|--------|-------------|--|---------------|
| 22                                | Manganese as Mn | mg/l       | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES) | 0.03   | 0.02 - 5.0  | 0.1  | 0.3           |
| 23                                | Zinc as Zn      | mg/l       | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES) | 0.24   | 0.05 - 15   | 5  | 15            |
| 24                                | Cadmium as Cd   | mg/l       | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES) | BDL    | 0.003 - 2.0 | 0.003                                      | No Relaxation |
| 25                                | Lead as Pb      | mg/l       | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES) | BDL    | 0.01 - 10   | 0.01                                       | No Relaxation |
| 26                                | Mercury as Hg   | µg/l       | APHA 24 <sup>th</sup> Ed. 2023 - 3112 B           | BDL    | 0.5 - 1000  | 1.0  | No Relaxation |
| 27                                | Nickel as Ni    | mg/l       | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES) | BDL    | 0.02 - 5.0  | 0.02                                       | No Relaxation |
| 28                                | Arsenic as As   | mg/l       | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES) | BDL    | 0.02 - 2.0  | 0.01                                       | 0.05          |
| 29                                | Total Chromium  | mg/l       | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES) | BDL    | 0.03 - 5.0  | 0.05                                       | No Relaxation |
| <b>Microbiological Parameters</b> |                 |            |   |        |             |  |               |
| 30                                | E. coli         | MPN/100 ml | IS: 1622 - 1981<br>Reaffirmed: 2019               | Absent | 1.8 - 1600  | Shall not be detected in any 100 ml sample |               |
| 31                                | T. coli         | MPN/100 ml | IS: 1622 - 1981<br>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.
- The result relate only to the items tested.
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- 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



# 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/1605/13830/2024 | Date of Report: 16.05.2024  |
| Name /Address/Type of Industry            | M/s Dhampur Bio-organics Limited<br>Unit: Meerganj, Division: Sugar<br>Village: Nagari Sadat, Block & Tehsil: Meerganj<br>District: Bareilly (Uttar Pradesh) - 243504 |

### SAMPLE DETAILS

|   |                      |                |   |                     |               |
|---|----------------------|----------------|---|---------------------|---------------|
| 1 | Water/ Waste Water   | Ground Water   | 5 | Packing Condition   | Sealed        |
| 2 | Sample Description   | Borewell Water | 6 | Sample Collected By | Industry Self |
| 3 | Sample received date | 09.05.2024     | 7 | Analysis Start Date | 09.05.2024    |
| 4 | Sample Quantity      | 5.0 liters     | 8 | Analysis End Date   | 15.05.2024    |

### TEST RESULT

| Sr. No                             | Test Parameter  | Unit  | Protocol/Test Method   | Result    | Range of testing /limit of detection | Indian Standard 10500: 2012 |               |
|------------------------------------|---|-------|--|-----------|--------------------------------------|-----------------------------|---------------|
|                                    |   |       |  |           | Desirable                            | Permissible                 |               |
| <b>Physico-chemical Parameters</b> |   |       |  |           |                                      |                             |               |
| 1                                  | Colour  | Hazen | IS: 3025 (Part - 4): 2021  | <5.0      | 5 - 30                               | 5                           | 15            |
| 2                                  | Odour   | -     | IS: 3025 (Part - 05): 2018   | Agreeable | Qualitative                          | Agreeable                   | Agreeable     |
| 3                                  | pH  | -     | APHA 24 <sup>th</sup> Ed. 2023 - 4500 H <sup>+</sup>                 | 7.5       | 1 - 14                               | 6.5-8.5                     | No Relaxation |
| 4                                  | Turbidity   | NTU   | APHA 24 <sup>th</sup> Ed. 2023 - 2130 B                              | BDL       | 2 - 40                               | 1                           | 5             |
| 5                                  | Total Dissolved Solids (TDS)                            | mg/l  | IS: 3025 (Part - 16): 2023   | 406.8     | 10 - 5000                            | 500                         | 2000          |
| 6                                  | Ammonia (as total ammonia-N)                            | mg/l  | APHA 24 <sup>th</sup> Ed. 2023 - 4500-NH <sub>3</sub> F              | BDL       | 0.5 - 2.0                            | 0.5                         | No Relaxation |
| 7                                  | Anionic Detergents (as MBAS)                            | mg/l  | APHA 24 <sup>th</sup> Ed. 2023 - 5540 C                              | BDL       | 0.05 - 0.5                           | 0.2                         | 1.0           |
| 8                                  | Calcium as Ca   | mg/l  | IS: 3025 (Part - 40): 1991<br>Reaffirmed: 2019                       | 51.2      | 2.0 - 600                            | 75                          | 200           |
| 9                                  | Magnesium as Mg   | mg/l  | APHA 24 <sup>th</sup> Ed. 2023 - 3500 Mg, B                          | 30.13     | 0.1 - 400                            | 30                          | 100           |
| 10                                 | Chloride as Cl  | mg/l  | APHA 24 <sup>th</sup> Ed. 2023 - 4500-Cl <sup>-</sup> B              | 22.0      | 2.0 - 2000                           | 250                         | 1000          |
| 11                                 | Fluoride as F   | mg/l  | APHA 24 <sup>th</sup> Ed. 2023 - 4500 F <sup>-</sup> C               | 0.34      | 0.02 - 5.0                           | 1.0                         | 1.5           |
| 12                                 | Free Residual Chlorine                                  | mg/l  | IS: 3025 (Part - 26): 1986<br>Reaffirmed: 2019                       | BDL       | 0.1 - 5.0                            | 0.2                         | 1.0           |
| 13                                 | Nitrate as NO <sub>3</sub>                              | mg/l  | IS: 3025 (Part-34): 1986<br>Reaffirmed: 2019                         | BDL       | 1.0 - 70                             | 45                          | No Relaxation |
| 14                                 | Phenolic Compound (as C <sub>6</sub> H <sub>5</sub> OH) | mg/l  | APHA 24 <sup>th</sup> Ed. 2023 - 5530 C                              | BDL       | 0.001-0.005                          | 0.001                       | 0.002         |
| 15                                 | Sulphate as SO <sub>4</sub>                             | mg/l  | APHA 24 <sup>th</sup> Ed. 2023 - 4500- SO <sub>4</sub> <sup>2-</sup> | 28.0      | 1.0 - 500                            | 200                         | 400           |
| 16                                 | Alkalinity as CaCO <sub>3</sub>                         | mg/l  | APHA 24 <sup>th</sup> Ed. 2023 - 2320 B                              | 276.0     | 2.0 - 1000                           | 200                         | 600           |
| 17                                 | Total Hardness as CaCO <sub>3</sub>                     | mg/l  | APHA 24 <sup>th</sup> Ed. 2023 - 2340 C                              | 252.0     | 5.0 - 800                            | 200                         | 600           |
| 18                                 | Aluminium as Al   | mg/l  | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | BDL       | 0.015 - 5.0                          | 0.03                        | 0.2           |
| 19                                 | Boron as B  | mg/l  | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | BDL       | 0.05 - 2.0                           | 0.5                         | 1.0           |
| 20                                 | Copper as Cu  | mg/l  | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | BDL       | 0.03 - 10                            | 0.05                        | 1.5           |
| 21                                 | Iron as Fe  | mg/l  | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | 0.16      | 0.05 - 20                            | 0.3                         | No Relaxation |



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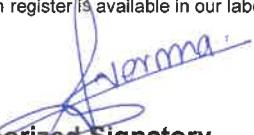
Test Report Ref No.: ETRC/1605/13830/2024

|                                   |                 |            |   |        |             |  |               |
|-----------------------------------|-----------------|------------|---|--------|-------------|--|---------------|
| 22                                | Manganese as Mn | mg/l       | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES) | 0.02   | 0.02 - 5.0  | 0.1  | 0.3           |
| 23                                | Zinc as Zn      | mg/l       | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES) | 0.33   | 0.05 - 15   | 5  | 15            |
| 24                                | Cadmium as Cd   | mg/l       | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES) | BDL    | 0.003 - 2.0 | 0.003                                      | No Relaxation |
| 25                                | Lead as Pb      | mg/l       | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES) | BDL    | 0.01 - 10   | 0.01                                       | No Relaxation |
| 26                                | Mercury as Hg   | µg/l       | APHA 24 <sup>th</sup> Ed. 2023 - 3112 B           | BDL    | 0.5 - 1000  | 1.0  | No Relaxation |
| 27                                | Nickel as Ni    | mg/l       | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES) | BDL    | 0.02 - 5.0  | 0.02                                       | No Relaxation |
| 28                                | Arsenic as As   | mg/l       | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES) | BDL    | 0.02 - 2.0  | 0.01                                       | 0.05          |
| 29                                | Total Chromium  | mg/l       | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES) | BDL    | 0.03 - 5.0  | 0.05                                       | No Relaxation |
| <b>Microbiological Parameters</b> |                 |            |   |        |             |  |               |
| 30                                | E. coli         | MPN/100 ml | IS: 1622 - 1981<br>Reaffirmed: 2019               | Absent | 1.8 - 1600  | Shall not be detected in any 100 ml sample |               |
| 31                                | T. coli         | MPN/100 ml | IS: 1622 - 1981<br>Reaffirmed: 2019               | Absent | 1.8 - 1600  | 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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(Ritu Garg)  
QM



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ETRC/PM09/TEST-REP/FT/45

## TEST REPORT WATER & WASTE WATER ANALYSIS

|   |   |
|---|---|
| Test Report Ref No.: ETRC/2006/13831/2024 | Date of Report: 20.06.2024  |
| Name /Address/Type of Industry            | M/s Dhampur Bio-organics Limited<br>Unit: Meerganj, Division: Sugar<br>Village: Nagari Sadat, Block & Tehsil: Meerganj<br>District: Bareilly (Uttar Pradesh) - 243504 |

### SAMPLE DETAILS

|   |                      |                |   |                     |               |
|---|----------------------|----------------|---|---------------------|---------------|
| 1 | Water/ Waste Water   | Ground Water   | 5 | Packing Condition   | Sealed        |
| 2 | Sample Description   | Borewell Water | 6 | Sample Collected By | Industry Self |
| 3 | Sample received date | 13.06.2024     | 7 | Analysis Start Date | 13.06.2024    |
| 4 | Sample Quantity      | 5.0 liters     | 8 | Analysis End Date   | 19.06.2024    |

### TEST RESULT

| Sr. No                             | Test Parameter  | Unit  | Protocol/Test Method   | Result    | Range of testing /limit of detection | Indian Standard 10500: 2012 |               |
|------------------------------------|---|-------|--|-----------|--------------------------------------|-----------------------------|---------------|
|                                    |   |       |  |           | Desirable                            | Permissible                 |               |
| <b>Physico-chemical Parameters</b> |   |       |  |           |                                      |                             |               |
| 1                                  | Colour  | Hazen | IS: 3025 (Part - 04): 2021   | <5.0      | 5 - 30                               | 5                           | 15            |
| 2                                  | Odour   | -     | IS: 3025 (Part - 05): 2018   | Agreeable | Qualitative                          | Agreeable                   | Agreeable     |
| 3                                  | pH  | -     | APHA 24 <sup>th</sup> Ed. 2023 - 4500 H <sup>+</sup>                 | 7.5       | 1 - 14                               | 6.5-8.5                     | No Relaxation |
| 4                                  | Turbidity   | NTU   | APHA 24 <sup>th</sup> Ed. 2023 - 2130 B                              | BDL       | 2 - 40                               | 1                           | 5             |
| 5                                  | Total Dissolved Solids (TDS)                            | mg/l  | IS: 3025 (Part - 16): 2023   | 396.0     | 10 - 5000                            | 500                         | 2000          |
| 6                                  | Ammonia (as total ammonia-N)                            | mg/l  | APHA 24 <sup>th</sup> Ed. 2023 - 4500-NH <sub>3</sub> F              | BDL       | 0.5 - 2.0                            | 0.5                         | No Relaxation |
| 7                                  | Anionic Detergents (as MBAS)                            | mg/l  | APHA 24 <sup>th</sup> 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                          | 51.2      | 2.0 - 600                            | 75                          | 200           |
| 9                                  | Magnesium as Mg   | mg/l  | APHA 24 <sup>th</sup> Ed. 2023 - 3500 Mg, B                          | 29.16     | 0.1 - 400                            | 30                          | 100           |
| 10                                 | Chloride as Cl  | mg/l  | APHA 24 <sup>th</sup> Ed. 2023 - 4500-Cl <sup>-</sup> B              | 28.0      | 2.0 - 2000                           | 250                         | 1000          |
| 11                                 | Fluoride as F   | mg/l  | APHA 24 <sup>th</sup> Ed. 2023 - 4500 F <sup>-</sup> C               | 0.28      | 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 <sub>3</sub>                              | mg/l  | IS: 3025 (Part-34): 1986 Reaffirmed: 2019                            | BDL       | 1.0 - 70                             | 45                          | No Relaxation |
| 14                                 | Phenolic Compound (as C <sub>6</sub> H <sub>5</sub> OH) | mg/l  | APHA 24 <sup>th</sup> Ed. 2023 - 5530 C                              | BDL       | 0.001-0.005                          | 0.001                       | 0.002         |
| 15                                 | Sulphate as SO <sub>4</sub>                             | mg/l  | APHA 24 <sup>th</sup> Ed. 2023 - 4500- SO <sub>4</sub> <sup>2-</sup> | 30.0      | 1.0 - 500                            | 200                         | 400           |
| 16                                 | Alkalinity as CaCO <sub>3</sub>                         | mg/l  | APHA 24 <sup>th</sup> Ed. 2023 - 2320 B                              | 268.0     | 2.0 - 1000                           | 200                         | 600           |
| 17                                 | Total Hardness as CaCO <sub>3</sub>                     | mg/l  | APHA 24 <sup>th</sup> Ed. 2023 - 2340 C                              | 248.0     | 5.0 - 800                            | 200                         | 600           |
| 18                                 | Aluminium as Al   | mg/l  | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | BDL       | 0.015 - 5.0                          | 0.03                        | 0.2           |
| 19                                 | Boron as B  | mg/l  | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | BDL       | 0.05 - 2.0                           | 0.5                         | 1.0           |
| 20                                 | Copper as Cu  | mg/l  | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | BDL       | 0.03 - 10                            | 0.05                        | 1.5           |
| 21                                 | Iron as Fe  | mg/l  | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | 0.14      | 0.05 - 20                            | 0.3                         | No Relaxation |

Page 1 of 2



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Test Report Ref No.: ETRC/2006/13831/2024

|                                   |                 |            |   |        |             |  |               |
|-----------------------------------|-----------------|------------|---|--------|-------------|--|---------------|
| 22                                | Manganese as Mn | mg/l       | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES) | 0.06   | 0.02 - 5.0  | 0.1  | 0.3           |
| 23                                | Zinc as Zn      | mg/l       | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES) | 0.28   | 0.05 - 15   | 5  | 15            |
| 24                                | Cadmium as Cd   | mg/l       | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES) | BDL    | 0.003 - 2.0 | 0.003                                      | No Relaxation |
| 25                                | Lead as Pb      | mg/l       | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES) | BDL    | 0.01 - 10   | 0.01                                       | No Relaxation |
| 26                                | Mercury as Hg   | µg/l       | APHA 24 <sup>th</sup> Ed. 2023 - 3112 B           | BDL    | 0.5 - 1000  | 1.0  | No Relaxation |
| 27                                | Nickel as Ni    | mg/l       | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES) | BDL    | 0.02 - 5.0  | 0.02                                       | No Relaxation |
| 28                                | Arsenic as As   | mg/l       | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES) | BDL    | 0.02 - 2.0  | 0.01                                       | 0.05          |
| 29                                | Total Chromium  | mg/l       | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES) | BDL    | 0.03 - 5.0  | 0.05                                       | No Relaxation |
| <b>Microbiological Parameters</b> |                 |            |   |        |             |  |               |
| 30                                | E. coli         | MPN/100 ml | IS: 1622 - 1981<br>Reaffirmed: 2019               | Absent | 1.8 - 1600  | Shall not be detected in any 100 ml sample |               |
| 31                                | T. coli         | MPN/100 ml | IS: 1622 - 1981<br>Reaffirmed: 2019               | Absent | 1.8 - 1600  | Shall not be detected in any 100 ml sample |               |

BDL=Below Detection Limit

..... END OF REPORT.....

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ETRC/PM09/TEST-REP/FT/45

## TEST REPORT WATER & WASTE WATER ANALYSIS

|   |   |
|---|---|
| Test Report Ref No.: ETRC/2507/13832/2024 | Date of Report: 25.07.2024  |
| Name /Address/Type of Industry            | M/s Dhampur Bio-organics Limited<br>Unit: Meerganj, Division: Sugar<br>Village: Nagari Sadat, Block & Tehsil: Meerganj<br>District: Bareilly (Uttar Pradesh) - 243504 |

### SAMPLE DETAILS

|   |                      |                |   |                     |               |
|---|----------------------|----------------|---|---------------------|---------------|
| 1 | Water/ Waste Water   | Ground Water   | 5 | Packing Condition   | Sealed        |
| 2 | Sample Description   | Borewell Water | 6 | Sample Collected By | Industry Self |
| 3 | Sample received date | 15.07.2024     | 7 | Analysis Start Date | 15.07.2024    |
| 4 | Sample Quantity      | 5.0 liters     | 8 | Analysis End Date   | 24.07.2024    |

### TEST RESULT

| Sr. No                             | Test Parameter  | Unit  | Protocol/Test Method   | Result    | Range of testing /limit of detection | Indian Standard 10500: 2012 |               |
|------------------------------------|---|-------|--|-----------|--------------------------------------|-----------------------------|---------------|
|                                    |   |       |  |           | Desirable                            | Permissible                 |               |
| <b>Physico-chemical Parameters</b> |   |       |  |           |                                      |                             |               |
| 1                                  | Colour  | Hazen | IS: 3025 (Part - 4): 2021  | <5.0      | 5 - 30                               | 5                           | 15            |
| 2                                  | Odour   | -     | IS: 3025 (Part - 05): 2018   | Agreeable | Qualitative                          | Agreeable                   | Agreeable     |
| 3                                  | pH  | -     | APHA 24 <sup>th</sup> Ed. 2023 - 4500 H <sup>+</sup>                 | 7.3       | 1 - 14                               | 6.5-8.5                     | No Relaxation |
| 4                                  | Turbidity   | NTU   | APHA 24 <sup>th</sup> Ed. 2023 - 2130 B                              | BDL       | 2 - 40                               | 1                           | 5             |
| 5                                  | Total Dissolved Solids (TDS)                            | mg/l  | IS: 3025 (Part - 16): 2023   | 398.6     | 10 - 5000                            | 500                         | 2000          |
| 6                                  | Ammonia (as total ammonia-N)                            | mg/l  | APHA 24 <sup>th</sup> Ed. 2023 - 4500-NH <sub>3</sub> F              | BDL       | 0.5 - 2.0                            | 0.5                         | No Relaxation |
| 7                                  | Anionic Detergents (as MBAS)                            | mg/l  | APHA 24 <sup>th</sup> Ed. 2023 - 5540 C                              | BDL       | 0.05 - 0.5                           | 0.2                         | 1.0           |
| 8                                  | Calcium as Ca   | mg/l  | IS: 3025 (Part - 40): 1991<br>Reaffirmed: 2019                       | 54.4      | 2.0 - 600                            | 75                          | 200           |
| 9                                  | Magnesium as Mg   | mg/l  | APHA 24 <sup>th</sup> Ed. 2023 - 3500 Mg, B                          | 29.16     | 0.1 - 400                            | 30                          | 100           |
| 10                                 | Chloride as Cl  | mg/l  | APHA 24 <sup>th</sup> Ed. 2023 - 4500-Cl <sup>-</sup> B              | 20.0      | 2.0 - 2000                           | 250                         | 1000          |
| 11                                 | Fluoride as F   | mg/l  | APHA 24 <sup>th</sup> Ed. 2023 - 4500 F <sup>-</sup> C               | 0.32      | 0.02 - 5.0                           | 1.0                         | 1.5           |
| 12                                 | Free Residual Chlorine                                  | mg/l  | IS: 3025 (Part - 26): 1986<br>Reaffirmed: 2019                       | BDL       | 0.1 - 5.0                            | 0.2                         | 1.0           |
| 13                                 | Nitrate as NO <sub>3</sub>                              | mg/l  | IS: 3025 (Part-34): 1986<br>Reaffirmed: 2019                         | BDL       | 1.0 - 70                             | 45                          | No Relaxation |
| 14                                 | Phenolic Compound (as C <sub>6</sub> H <sub>5</sub> OH) | mg/l  | APHA 24 <sup>th</sup> Ed. 2023 - 5530 C                              | BDL       | 0.001-0.005                          | 0.001                       | 0.002         |
| 15                                 | Sulphate as SO <sub>4</sub>                             | mg/l  | APHA 24 <sup>th</sup> Ed. 2023 - 4500- SO <sub>4</sub> <sup>2-</sup> | 24.0      | 1.0 - 500                            | 200                         | 400           |
| 16                                 | Alkalinity as CaCO <sub>3</sub>                         | mg/l  | APHA 24 <sup>th</sup> Ed. 2023 - 2320 B                              | 280.0     | 2.0 - 1000                           | 200                         | 600           |
| 17                                 | Total Hardness as CaCO <sub>3</sub>                     | mg/l  | APHA 24 <sup>th</sup> Ed. 2023 - 2340 C                              | 256.0     | 5.0 - 800                            | 200                         | 600           |
| 18                                 | Aluminium as Al   | mg/l  | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | BDL       | 0.015 - 5.0                          | 0.03                        | 0.2           |
| 19                                 | Boron as B  | mg/l  | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | BDL       | 0.05 - 2.0                           | 0.5                         | 1.0           |
| 20                                 | Copper as Cu  | mg/l  | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | BDL       | 0.03 - 10                            | 0.05                        | 1.5           |
| 21                                 | Iron as Fe  | mg/l  | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | 0.10      | 0.05 - 20                            | 0.3                         | No Relaxation |



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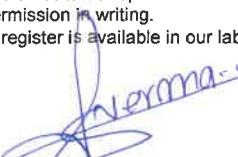
Test Report Ref No.: ETRC/2507/13832/2024

|                                   |                 |            |   |        |             |  |               |
|-----------------------------------|-----------------|------------|---|--------|-------------|--|---------------|
| 22                                | Manganese as Mn | mg/l       | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES) | 0.02   | 0.02 - 5.0  | 0.1  | 0.3           |
| 23                                | Zinc as Zn      | mg/l       | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES) | 0.26   | 0.05 - 15   | 5  | 15            |
| 24                                | Cadmium as Cd   | mg/l       | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES) | BDL    | 0.003 - 2.0 | 0.003                                      | No Relaxation |
| 25                                | Lead as Pb      | mg/l       | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES) | BDL    | 0.01 - 10   | 0.01                                       | No Relaxation |
| 26                                | Mercury as Hg   | µg/l       | APHA 24 <sup>th</sup> Ed. 2023 - 3112 B           | BDL    | 0.5 - 1000  | 1.0  | No Relaxation |
| 27                                | Nickel as Ni    | mg/l       | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES) | BDL    | 0.02 - 5.0  | 0.02                                       | No Relaxation |
| 28                                | Arsenic as As   | mg/l       | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES) | BDL    | 0.02 - 2.0  | 0.01                                       | 0.05          |
| 29                                | Total Chromium  | mg/l       | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES) | BDL    | 0.03 - 5.0  | 0.05                                       | No Relaxation |
| <b>Microbiological Parameters</b> |                 |            |   |        |             |  |               |
| 30                                | E. coli         | MPN/100 ml | IS: 1622 - 1981<br>Reaffirmed: 2019               | Absent | 1.8 - 1600  | Shall not be detected in any 100 ml sample |               |
| 31                                | T. coli         | MPN/100 ml | IS: 1622 - 1981<br>Reaffirmed: 2019               | Absent | 1.8 - 1600  | 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



  
Authorized Signatory  
(Ritu Garg)  
QM



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ETRC/PM09/TEST-REP/FT/45

## TEST REPORT WATER & WASTE WATER ANALYSIS

|   |   |
|---|---|
| Test Report Ref No.: ETRC/2108/13833/2024 | Date of Report: 21.08.2024  |
| Name /Address/Type of Industry            | M/s Dhampur Bio-organics Limited<br>Unit: Meerganj, Division: Sugar<br>Village: Nagari Sadat, Block & Tehsil: Meerganj<br>District: Bareilly (Uttar Pradesh) - 243504 |

### SAMPLE DETAILS

|   |                      |                |   |                     |               |
|---|----------------------|----------------|---|---------------------|---------------|
| 1 | Water/ Waste Water   | Ground Water   | 5 | Packing Condition   | Sealed        |
| 2 | Sample Description   | Borewell Water | 6 | Sample Collected By | Industry Self |
| 3 | Sample received date | 16.08.2024     | 7 | Analysis Start Date | 16.08.2024    |
| 4 | Sample Quantity      | 5.0 liters     | 8 | Analysis End Date   | 20.08.2024    |

### TEST RESULT

| Sr. No                             | Test Parameter  | Unit  | Protocol/Test Method   | Result    | Range of testing /limit of detection | Indian Standard 10500: 2012 |               |
|------------------------------------|---|-------|--|-----------|--------------------------------------|-----------------------------|---------------|
|                                    |   |       |  |           | Desirable                            | Permissible                 |               |
| <b>Physico-chemical Parameters</b> |   |       |  |           |                                      |                             |               |
| 1                                  | Colour  | Hazen | IS: 3025 (Part - 04): 2021   | <5.0      | 5 - 30                               | 5                           | 15            |
| 2                                  | Odour   | -     | IS: 3025 (Part - 05): 2018   | Agreeable | Qualitative                          | Agreeable                   | Agreeable     |
| 3                                  | pH  | -     | APHA 24 <sup>th</sup> Ed. 2023 - 4500 H <sup>+</sup>                 | 7.5       | 1 - 14                               | 6.5-8.5                     | No Relaxation |
| 4                                  | Turbidity   | NTU   | APHA 24 <sup>th</sup> Ed. 2023 - 2130 B                              | BDL       | 2 - 40                               | 1                           | 5             |
| 5                                  | Total Dissolved Solids (TDS)                            | mg/l  | IS: 3025 (Part - 16): 2023   | 390.4     | 10 - 5000                            | 500                         | 2000          |
| 6                                  | Ammonia (as total ammonia-N)                            | mg/l  | APHA 24 <sup>th</sup> Ed. 2023 - 4500-NH <sub>3</sub> F              | BDL       | 0.5 - 2.0                            | 0.5                         | No Relaxation |
| 7                                  | Anionic Detergents (as MBAS)                            | mg/l  | APHA 24 <sup>th</sup> Ed. 2023 - 5540 C                              | BDL       | 0.05 - 0.5                           | 0.2                         | 1.0           |
| 8                                  | Calcium as Ca   | mg/l  | IS: 3025 (Part - 40): 1991<br>Reaffirmed: 2019                       | 49.6      | 2.0 - 600                            | 75                          | 200           |
| 9                                  | Magnesium as Mg   | mg/l  | APHA 24 <sup>th</sup> Ed. 2023 - 3500 Mg, B                          | 29.16     | 0.1 - 400                            | 30                          | 100           |
| 10                                 | Chloride as Cl  | mg/l  | APHA 24 <sup>th</sup> Ed. 2023 - 4500-Cl <sup>-</sup> B              | 24.0      | 2.0 - 2000                           | 250                         | 1000          |
| 11                                 | Fluoride as F   | mg/l  | APHA 24 <sup>th</sup> Ed. 2023 - 4500 F <sup>-</sup> C               | 0.24      | 0.02 - 5.0                           | 1.0                         | 1.5           |
| 12                                 | Free Residual Chlorine                                  | mg/l  | IS: 3025 (Part - 26): 1986<br>Reaffirmed: 2019                       | BDL       | 0.1 - 5.0                            | 0.2                         | 1.0           |
| 13                                 | Nitrate as NO <sub>3</sub>                              | mg/l  | IS: 3025 (Part-34): 1986<br>Reaffirmed: 2019                         | BDL       | 1.0 - 70                             | 45                          | No Relaxation |
| 14                                 | Phenolic Compound (as C <sub>6</sub> H <sub>5</sub> OH) | mg/l  | APHA 24 <sup>th</sup> Ed. 2023 - 5530 C                              | BDL       | 0.001-0.005                          | 0.001                       | 0.002         |
| 15                                 | Sulphate as SO <sub>4</sub>                             | mg/l  | APHA 24 <sup>th</sup> Ed. 2023 - 4500- SO <sub>4</sub> <sup>2-</sup> | 26.0      | 1.0 - 500                            | 200                         | 400           |
| 16                                 | Alkalinity as CaCO <sub>3</sub>                         | mg/l  | APHA 24 <sup>th</sup> Ed. 2023 - 2320 B                              | 268.0     | 2.0 - 1000                           | 200                         | 600           |
| 17                                 | Total Hardness as CaCO <sub>3</sub>                     | mg/l  | APHA 24 <sup>th</sup> Ed. 2023 - 2340 C                              | 244.0     | 5.0 - 800                            | 200                         | 600           |
| 18                                 | Aluminium as Al   | mg/l  | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | BDL       | 0.015 - 5.0                          | 0.03                        | 0.2           |
| 19                                 | Boron as B  | mg/l  | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | BDL       | 0.05 - 2.0                           | 0.5                         | 1.0           |
| 20                                 | Copper as Cu  | mg/l  | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | BDL       | 0.03 - 10                            | 0.05                        | 1.5           |
| 21                                 | Iron as Fe  | mg/l  | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | 0.13      | 0.05 - 20                            | 0.3                         | No Relaxation |



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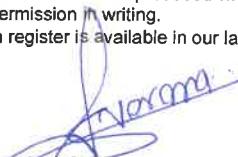
Test Report Ref No.: ETRC/2108/13833/2024

|                                   |                 |            |   |        |             |  |               |
|-----------------------------------|-----------------|------------|---|--------|-------------|--|---------------|
| 22                                | Manganese as Mn | mg/l       | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES) | 0.04   | 0.02 - 5.0  | 0.1  | 0.3           |
| 23                                | Zinc as Zn      | mg/l       | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES) | 0.33   | 0.05 - 15   | 5  | 15            |
| 24                                | Cadmium as Cd   | mg/l       | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES) | BDL    | 0.003 - 2.0 | 0.003                                      | No Relaxation |
| 25                                | Lead as Pb      | mg/l       | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES) | BDL    | 0.01 - 10   | 0.01                                       | No Relaxation |
| 26                                | Mercury as Hg   | µg/l       | APHA 24 <sup>th</sup> Ed. 2023 - 3112 B           | BDL    | 0.5 - 1000  | 1.0  | No Relaxation |
| 27                                | Nickel as Ni    | mg/l       | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES) | BDL    | 0.02 - 5.0  | 0.02                                       | No Relaxation |
| 28                                | Arsenic as As   | mg/l       | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES) | BDL    | 0.02 - 2.0  | 0.01                                       | 0.05          |
| 29                                | Total Chromium  | mg/l       | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES) | BDL    | 0.03 - 5.0  | 0.05                                       | No Relaxation |
| <b>Microbiological Parameters</b> |                 |            |   |        |             |  |               |
| 30                                | E. coli         | MPN/100 ml | IS: 1622 - 1981<br>Reaffirmed: 2019               | Absent | 1.8 - 1600  | Shall not be detected in any 100 ml sample |               |
| 31                                | T. coli         | MPN/100 ml | IS: 1622 - 1981<br>Reaffirmed: 2019               | Absent | 1.8 - 1600  | 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)  
QM



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ETRC/PM09/TEST-REP/FT/42

## TEST REPORT AMBIENT AIR QUALITY MONITORING REPORT

|  |   |   |                                   |
|--|---|---|-----------------------------------|
| <b>Test Report Ref No.:</b> ETRC/2609/13834/2024 |   | <b>Date of Report:</b> 26.09.2024   |                                   |
| <b>Name /Address/Type of Industry</b>            |   | <b>M/s Dhampur Bio-organics Limited<br/>Unit: Meerganj, Division: Sugar<br/>Village: Nagari Sadat, Block &amp; Tehsil: Meerganj<br/>District: Bareilly (Uttar Pradesh) - 243504</b> |                                   |
| <b>Monitored by</b>                              |   | <b>ETRC, Lucknow</b>  |                                   |
| <b>Location of Sampling points</b>               |   | <b>Near Main Gate</b>   |                                   |
| <b>1</b>   | <b>GENERAL OBSERVATIONS</b>   | <b>DETAILS - PM<sub>10</sub></b>  | <b>DETAILS - PM<sub>2.5</sub></b> |
| (a)  | Weather conditions  | Clear   | Clear                             |
| (b)  | Wind direction  | West to East  | West to East                      |
| (c)  | Average humidity (%)  | 54  | 54                                |
| (d)  | Average ambient temperature (°C)  | 32  | 32                                |
| (e)  | Time of Sampling Started (Hours)  | 11:26 am (18/09/2024)   | 11:26 am (18/09/2024)             |
| (f)  | Time of Sampling completed (Hours)  | 11:13 am (19/09/2024)   | 11:13 am (19/09/2024)             |
| (g)  | Total time of sampling (minutes)  | 24 hour (1411 minutes)  | 24 hour (1411 minutes)            |
| <b>2</b>   | <b>Average sampling rate for PM (m<sup>3</sup>/minute)</b>                    | <b>1.165</b>  | <b>NA</b>                         |
| <b>3</b>   | <b>Average sampling rate for gas (LPM)</b>                                    | <b>0.5</b>  | <b>NA</b>                         |
| <b>4</b>   | <b>TOTAL VOLUME OF AIR SAMPLED</b><br>• PM (m <sup>3</sup> )<br>• GAS (liter) | • 1643.349<br>• 705.3   | • 23.504                          |

## TEST RESULT

| <b>Sr. No.</b> | <b>Particulars</b>   | <b>Protocol</b>                                | <b>Unit</b>       | <b>Result</b> | <b>Standard as per NAAQS; dated 18/11/ 2009</b> |
|----------------|--|--|-------------------|---------------|---|
| 1              | Particulate matters size less than 10 µm (PM <sub>10</sub> )   | IS: 5182 (Part - 23): 2006<br>Reaffirmed: 2022 | µg/m <sup>3</sup> | 89.4          | For 24 hour = 100                               |
| 2              | Particulate matters size less than 2.5 µm (PM <sub>2.5</sub> ) | IS: 5182 (Part - 24): 2019                     | µg/m <sup>3</sup> | 53.18         | For 24 hour = 60                                |
| 3              | Sulphur Dioxide (SO <sub>2</sub> )                             | IS: 5182 (Part - 02): 2001<br>Reaffirmed: 2022 | µg/m <sup>3</sup> | 14.56         | For 24 hour = 80                                |
| 4              | Oxides of Nitrogen (NO <sub>x</sub> )                          | IS: 5182 (Part - 06): 2006<br>Reaffirmed: 2022 | µg/m <sup>3</sup> | 21.39         | For 24 hour = 80                                |

..... END OF REPORT .....

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(Sandeep Kr Verma)  
Lab-Incharge

*Sandeep Kr Verma*



Authorized Signatory  
(Ritu Garg)  
QM

*Ritu Garg*



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ETRC/PM09/TEST-REP/FT/42

## TEST REPORT AMBIENT AIR QUALITY MONITORING REPORT

|   |   |                                   |
|---|---|-----------------------------------|
| <b>Test Report Ref No.:</b> ETRC/2609/13835/2024                                | <b>Date of Report:</b> 26.09.2024   |                                   |
| <b>Name /Address/Type of Industry</b>   | <b>M/s Dhampur Bio-organics Limited</b><br><b>Unit: Meerganj, Division: Sugar</b><br><b>Village: Nagari Sadat, Block &amp; Tehsil: Meerganj</b><br><b>District: Bareilly (Uttar Pradesh) - 243504</b> |                                   |
| <b>Monitored by</b>   | <b>ETRC, Lucknow</b>  |                                   |
| <b>Location of Sampling points</b>  | <b>Village: Nagaria Sadat</b>   |                                   |
| <b>1 GENERAL OBSERVATIONS</b>   | <b>DETAILS - PM<sub>10</sub></b>  | <b>DETAILS - PM<sub>2.5</sub></b> |
| (a) Weather conditions  | Clear   | Clear                             |
| (b) Wind direction  | West to East  | West to East                      |
| (c) Average humidity (%)  | 54  | 54                                |
| (d) Average ambient temperature (°C)  | 32  | 32                                |
| (e) Time of Sampling Started (Hours)  | 11:48 am (18/09/2024)   | 11:48 am (18/09/2024)             |
| (f) Time of Sampling completed (Hours)  | 11:23 am (19/09/2024)   | 11:23 am (19/09/2024)             |
| (g) Total time of sampling (minutes)  | 24 hour (1407 minutes)  | 24 hour (1407 minutes)            |
| <b>2 Average sampling rate for PM (m<sup>3</sup>/minute)</b>                    | 1.170   | NA                                |
| <b>3 Average sampling rate for gas (LPM)</b>                                    | 0.5   | NA                                |
| <b>4 TOTAL VOLUME OF AIR SAMPLED</b><br>• PM (m <sup>3</sup> )<br>• GAS (liter) | • 1646.190<br>• 703.5   | • 23.446                          |

## TEST RESULT

| <b>Sr. No.</b> | <b>Particulars</b>   | <b>Protocol</b>                                | <b>Unit</b>       | <b>Result</b> | <b>Standard as per NAAQS; dated 18/11/ 2009</b> |
|----------------|--|--|-------------------|---------------|---|
| 1              | Particulate matters size less than 10 µm (PM <sub>10</sub> )   | IS: 5182 (Part - 23): 2006<br>Reaffirmed: 2022 | µg/m <sup>3</sup> | 78.6          | For 24 hour = 100                               |
| 2              | Particulate matters size less than 2.5 µm (PM <sub>2.5</sub> ) | IS: 5182 (Part - 24): 2019                     | µg/m <sup>3</sup> | 49.48         | For 24 hour = 60                                |
| 3              | Sulphur Dioxide (SO <sub>2</sub> )                             | IS: 5182 (Part - 02): 2001<br>Reaffirmed: 2022 | µg/m <sup>3</sup> | 12.63         | For 24 hour = 80                                |
| 4              | Oxides of Nitrogen (NO <sub>x</sub> )                          | IS: 5182 (Part - 06): 2006<br>Reaffirmed: 2022 | µg/m <sup>3</sup> | 17.51         | For 24 hour = 80                                |

..... END OF REPORT.....

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ETRC/PM09/TEST-REP/FT/42

## TEST REPORT AMBIENT AIR QUALITY MONITORING REPORT

|   |  |   |                             |
|---|--|---|-----------------------------|
| Test Report Ref No.: ETRC/2609/13836/2024 |  | Date of Report: 26.09.2024  |                             |
| Name /Address/Type of Industry            |  | M/s Dhampur Bio-organics Limited<br>Unit: Meerganj, Division: Sugar<br>Village: Nagari Sadat, Block & Tehsil: Meerganj<br>District: Bareilly (Uttar Pradesh) - 243504 |                             |
| Monitored by                              |  | ETRC, Lucknow   |                             |
| Location of Sampling points               |  | Village: Jatan  |                             |
| 1   | GENERAL OBSERVATIONS   | DETAILS - PM <sub>10</sub>  | DETAILS - PM <sub>2.5</sub> |
| (a)                                       | Weather conditions   | Clear   | Clear                       |
| (b)                                       | Wind direction   | West to East  | West to East                |
| (c)                                       | Average humidity (%)   | 54  | 54                          |
| (d)                                       | Average ambient temperature (°C)                                       | 31  | 31                          |
| (e)                                       | Time of Sampling Started (Hours)                                       | 11:43 am (19/09/2024)   | 11:43 am (19/09/2024)       |
| (f)                                       | Time of Sampling completed (Hours)                                     | 11:24 am (20/09/2024)   | 11:24 am (20/09/2024)       |
| (g)                                       | Total time of sampling (minutes)                                       | 24 hour (1411 minutes)  | 24 hour (1411 minutes)      |
| 2   | Average sampling rate for PM (m <sup>3</sup> /minute)                  | 1.160   | NA                          |
| 3   | Average sampling rate for gas (LPM)                                    | 0.5   | NA                          |
| 4   | TOTAL VOLUME OF AIR SAMPLED<br>• PM (m <sup>3</sup> )<br>• GAS (liter) | • 1636.296<br>• 705.3   | • 23.503                    |

## TEST RESULT

| Sr. No. | Particulars  | Protocol                                       | Unit              | Result | Standard as per NAAQS; dated 18/11/ 2009 |
|---------|--|--|-------------------|--------|--|
| 1       | Particulate matters size less than 10 µm (PM <sub>10</sub> )   | IS: 5182 (Part - 23): 2006<br>Reaffirmed: 2022 | µg/m <sup>3</sup> | 77.6   | For 24 hour = 100                        |
| 2       | Particulate matters size less than 2.5 µm (PM <sub>2.5</sub> ) | IS: 5182 (Part - 24): 2019                     | µg/m <sup>3</sup> | 48.50  | For 24 hour = 60                         |
| 3       | Sulphur Dioxide (SO <sub>2</sub> )                             | IS: 5182 (Part - 02): 2001<br>Reaffirmed: 2022 | µg/m <sup>3</sup> | 12.45  | For 24 hour = 80                         |
| 4       | Oxides of Nitrogen (NO <sub>x</sub> )                          | IS: 5182 (Part - 06): 2006<br>Reaffirmed: 2022 | µg/m <sup>3</sup> | 17.94  | For 24 hour = 80                         |

..... END OF REPORT.....

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- Complain register is available in our laboratory.

Authorized Signatory  
(Sandeep Kr Verma)  
Lab-Incharge



Ritu Garg  
Authorized Signatory  
(Ritu Garg)  
QM



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ETRC/PM09/TEST-REP/FT/42

## TEST REPORT AMBIENT AIR QUALITY MONITORING REPORT

|  |   |   |                                   |
|--|---|---|-----------------------------------|
| <b>Test Report Ref No.:</b> ETRC/2609/13837/2024 |   | <b>Date of Report:</b> 26.09.2024   |                                   |
| <b>Name /Address/Type of Industry</b>            |   | <b>M/s Dhampur Bio-organics Limited</b><br><b>Unit:</b> Meerganj, <b>Division:</b> Sugar<br><b>Village:</b> Nagari Sadat, <b>Block &amp; Tehsil:</b> Meerganj<br><b>District:</b> Bareilly (Uttar Pradesh) - 243504 |                                   |
| <b>Monitored by</b>                              |   | <b>ETRC, Lucknow</b>  |                                   |
| <b>Location of Sampling points</b>               |   | <b>Village: Sindhuli</b>  |                                   |
| <b>1</b>   | <b>GENERAL OBSERVATIONS</b>   | <b>DETAILS - PM<sub>10</sub></b>  | <b>DETAILS - PM<sub>2.5</sub></b> |
| (a)  | Weather conditions  | Clear   | Clear                             |
| (b)  | Wind direction  | West to East  | West to East                      |
| (c)  | Average humidity (%)  | 54  | 54                                |
| (d)  | Average ambient temperature (°C)  | 31  | 31                                |
| (e)  | Time of Sampling Started (Hours)  | 11:52 am (19/09/2024)   | 11:52 am (19/09/2024)             |
| (f)  | Time of Sampling completed (Hours)  | 11:39 am (20/09/2024)   | 11:39 am (20/09/2024)             |
| (g)  | Total time of sampling (minutes)  | 24 hour (1409 minutes)  | 24 hour (1409 minutes)            |
| <b>2</b>   | Average sampling rate for PM (m <sup>3</sup> /minute)                         | 1.170   | NA                                |
| <b>3</b>   | Average sampling rate for gas (LPM)   | 0.5   | NA                                |
| <b>4</b>   | <b>TOTAL VOLUME OF AIR SAMPLED</b><br>• PM (m <sup>3</sup> )<br>• GAS (liter) | • 1648.296<br>• 704.4   | • 23.472                          |

## TEST RESULT

| Sr. No. | Particulars  | Protocol                                       | Unit              | Result | Standard as per NAAQS; dated 18/11/ 2009 |
|---------|--|--|-------------------|--------|--|
| 1       | Particulate matters size less than 10 µm (PM <sub>10</sub> )   | IS: 5182 (Part - 23): 2006<br>Reaffirmed: 2022 | µg/m <sup>3</sup> | 76.3   | For 24 hour = 100                        |
| 2       | Particulate matters size less than 2.5 µm (PM <sub>2.5</sub> ) | IS: 5182 (Part - 24): 2019                     | µg/m <sup>3</sup> | 45.59  | For 24 hour = 60                         |
| 3       | Sulphur Dioxide (SO <sub>2</sub> )                             | IS: 5182 (Part - 02): 2001<br>Reaffirmed: 2022 | µg/m <sup>3</sup> | 12.06  | For 24 hour = 80                         |
| 4       | Oxides of Nitrogen (NO <sub>x</sub> )                          | IS: 5182 (Part - 06): 2006<br>Reaffirmed: 2022 | µg/m <sup>3</sup> | 17.48  | For 24 hour = 80                         |

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Authorized Signatory  
(Sandeep Kr Verma)  
Lab-Incharge



Authorized Signatory  
(Ritu Garg)  
QM



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ETRC/PM09/TEST-REP/FT/44

## TEST REPORT AMBIENT NOISE MONITORING AND ANALYSIS REPORT

|   |  |  |
|---|--|--|
| Test Report Ref No.: ETRC/2609/13838/2024 | Date of Report: 26.09.2024   |  |
| Name /Address/Type of Industry            | M/s Dhampur Bio-organics Limited<br>Unit: Meerganj, Division: Sugar<br>Village: Nagari Sadat, Block & Tehsil: Meerganj District: Bareilly (Uttar Pradesh) - 243504 |  |
| Monitored by                              | ETRC, Lucknow  |  |
| Sr. No.                                   | GENERAL INFORMATION  |  |
| (a)                                       | Date of monitoring   | 19/09/2024 (06:00 AM) to 20/09/2024 (06:00 AM) |
| (b)                                       | Sample Description   | Ambient Noise                                  |
| (c)                                       | Sampling Location  | Near Plant Premises                            |
| (d)                                       | Environmental Condition  | Normal   |
| (e)                                       | Monitoring Protocol  | IS: 9989: 1981, Reaffirmed: 2020               |

## TEST RESULT

| Ambient Noise Level |                        |       |  |  |
|---------------------|------------------------|-------|--|--|
| Sr. No.             | Parameter              | Unit  | Results<br>DAY TIME<br>(06:00 AM - 10:00 PM) | Results<br>NIGHT TIME<br>(10:00 PM - 06:00 AM) |
| 1                   | Equivalent sound level | dB(A) | 60.23  | 49.85  |

| Noise Standards as per CPCB Schedule rule 3(1) and 4(1) |                       |                     |            |
|---|-----------------------|---------------------|------------|
| Area Code   | Category of Area/Zone | Limits in dB(A) Leq |            |
|   |                       | Day Time            | Night Time |
| A   | Industrial Area       | 75                  | 70         |
| B   | Commercial Area       | 65                  | 55         |
| C   | Residential Area      | 55                  | 45         |
| D   | Silence Zone          | 50                  | 40         |

### ..... END OF REPORT .....

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ETRC/PM09/TEST-REP/FT/45

## TEST REPORT WATER & WASTE WATER ANALYSIS

|   |   |
|---|---|
| Test Report Ref No.: ETRC/2609/13839/2024 | Date of Report: 26.09.2024  |
| Name /Address/Type of Industry            | M/s Dhampur Bio-organics Limited<br>Unit: Meerganj, Division: Sugar<br>Village: Nagari Sadat, Block & Tehsil: Meerganj<br>District: Bareilly (Uttar Pradesh) - 243504 |

### SAMPLE DETAILS

|   |                      |                |   |                     |            |
|---|----------------------|----------------|---|---------------------|------------|
| 1 | Water/ Waste Water   | Ground Water   | 5 | Packing Condition   | Sealed     |
| 2 | Sample Description   | Borewell Water | 6 | Sample Collected By | ETRC       |
| 3 | Sample received date | 20.09.2024     | 7 | Analysis Start Date | 20.09.2024 |
| 4 | Sample Quantity      | 5.0 liters     | 8 | Analysis End Date   | 25.09.2024 |

### TEST RESULT

| Sr. No                             | Test Parameter  | Unit  | Protocol/Test Method   | Result    | Range of testing /limit of detection | Indian Standard 10500: 2012 |               |
|------------------------------------|---|-------|--|-----------|--------------------------------------|-----------------------------|---------------|
|                                    |   |       |  |           | Desirable                            | Permissible                 |               |
| <b>Physico-chemical Parameters</b> |   |       |  |           |                                      |                             |               |
| 1                                  | Colour  | Hazen | IS: 3025 (Part - 04): 2021   | <5.0      | 5 - 30                               | 5                           | 15            |
| 2                                  | Odour   | -     | IS: 3025 (Part - 05): 2018   | Agreeable | Qualitative                          | Agreeable                   | Agreeable     |
| 3                                  | pH  | -     | APHA 24 <sup>th</sup> Ed. 2023 - 4500 H <sup>+</sup>                 | 7.4       | 1 - 14                               | 6.5-8.5                     | No Relaxation |
| 4                                  | Turbidity   | NTU   | APHA 24 <sup>th</sup> 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 24 <sup>th</sup> Ed. 2023 - 4500-NH <sub>3</sub> F              | BDL       | 0.5 - 2.0                            | 0.5                         | No Relaxation |
| 7                                  | Anionic Detergents (as MBAS)                            | mg/l  | APHA 24 <sup>th</sup> 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 24 <sup>th</sup> Ed. 2023 - 3500 Mg, B                          | 29.16     | 0.1 - 400                            | 30                          | 100           |
| 10                                 | Chloride as Cl  | mg/l  | APHA 24 <sup>th</sup> Ed. 2023 - 4500-Cl' B                          | 26.0      | 2.0 - 2000                           | 250                         | 1000          |
| 11                                 | Fluoride as F   | mg/l  | APHA 24 <sup>th</sup> Ed. 2023 - 4500 F' C                           | 0.33      | 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 <sub>3</sub>                              | mg/l  | IS: 3025 (Part-34): 1986 Reaffirmed: 2019                            | BDL       | 1.0 - 70                             | 45                          | No Relaxation |
| 14                                 | Phenolic Compound (as C <sub>6</sub> H <sub>5</sub> OH) | mg/l  | APHA 24 <sup>th</sup> Ed. 2023 - 5530 C                              | BDL       | 0.001-0.005                          | 0.001                       | 0.002         |
| 15                                 | Sulphate as SO <sub>4</sub>                             | mg/l  | APHA 24 <sup>th</sup> Ed. 2023 - 4500- SO <sub>4</sub> <sup>2-</sup> | 24.0      | 1.0 - 500                            | 200                         | 400           |
| 16                                 | Alkalinity as CaCO <sub>3</sub>                         | mg/l  | APHA 24 <sup>th</sup> Ed. 2023 - 2320 B                              | 284.0     | 2.0 - 1000                           | 200                         | 600           |
| 17                                 | Total Hardness as CaCO <sub>3</sub>                     | mg/l  | APHA 24 <sup>th</sup> Ed. 2023 - 2340 C                              | 252.0     | 5.0 - 800                            | 200                         | 600           |
| 18                                 | Aluminium as Al   | mg/l  | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | BDL       | 0.015 - 5.0                          | 0.03                        | 0.2           |
| 19                                 | Boron as B  | mg/l  | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | BDL       | 0.05 - 2.0                           | 0.5                         | 1.0           |
| 20                                 | Copper as Cu  | mg/l  | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | BDL       | 0.03 - 10                            | 0.05                        | 1.5           |
| 21                                 | Iron as Fe  | mg/l  | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES)                    | 0.09      | 0.05 - 20                            | 0.3                         | No Relaxation |



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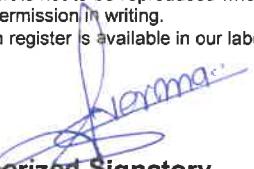
Test Report Ref No.: ETRC/2609/13839/2024

|                                   |                 |            |   |        |             |  |               |
|-----------------------------------|-----------------|------------|---|--------|-------------|--|---------------|
| 22                                | Manganese as Mn | mg/l       | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES) | 0.05   | 0.02 - 5.0  | 0.1  | 0.3           |
| 23                                | Zinc as Zn      | mg/l       | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES) | 0.42   | 0.05 - 15   | 5  | 15            |
| 24                                | Cadmium as Cd   | mg/l       | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES) | BDL    | 0.003 - 2.0 | 0.003                                      | No Relaxation |
| 25                                | Lead as Pb      | mg/l       | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES) | BDL    | 0.01 - 10   | 0.01                                       | No Relaxation |
| 26                                | Mercury as Hg   | µg/l       | APHA 24 <sup>th</sup> Ed. 2023 - 3112 B           | BDL    | 0.5 - 1000  | 1.0  | No Relaxation |
| 27                                | Nickel as Ni    | mg/l       | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES) | BDL    | 0.02 - 5.0  | 0.02                                       | No Relaxation |
| 28                                | Arsenic as As   | mg/l       | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES) | BDL    | 0.02 - 2.0  | 0.01                                       | 0.05          |
| 29                                | Total Chromium  | mg/l       | APHA 24 <sup>th</sup> Ed. 2023 - 3120 B (ICP-OES) | BDL    | 0.03 - 5.0  | 0.05                                       | No Relaxation |
| <b>Microbiological Parameters</b> |                 |            |   |        |             |  |               |
| 30                                | E. coli         | MPN/100 ml | IS: 1622 - 1981<br>Reaffirmed: 2019               | Absent | 1.8 - 1600  | Shall not be detected in any 100 ml sample |               |
| 31                                | T. coli         | MPN/100 ml | IS: 1622 - 1981<br>Reaffirmed: 2019               | Absent | 1.8 - 1600  | Shall not be detected in any 100 ml sample |               |

BDL=Below Detection Limit

..... END OF REPORT .....

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ETRC/PM09/TEST-REP/FT/46

## TEST REPORT SOIL ANALYSIS

|   |  |
|---|--|
| Test Report Ref No.: ETRC/2609/13840/2024 | Date of Report: 26.09.2024   |
| Name /Address/Type of Industry            | M/s Dhampur Bio-organics Limited<br>Unit: Meerganj, Division: Sugar<br>Village: Nagari Sadat, Block & Tehsil: Meerganj District: Bareilly (Uttar Pradesh) - 243504 |

### SAMPLE DETAILS

|                        |                 |                       |            |
|------------------------|-----------------|-----------------------|------------|
| 1 Sampling Location    | Within Premises | 5 Packing Condition   | Sealed     |
| 2 Sample Description   | Soil Sample     | 6 Sample Collected By | ETRC       |
| 3 Sample received date | 20.09.2024      | 7 Analysis Start Date | 20.09.2024 |
| 4 Sample Quantity      | 500 gms         | 8 Analysis End Date   | 25.09.2024 |

### TEST REPORT

| Sr. No. | Test Parameter          | Unit     | Protocol/Test Method                          | Result | Range of testing /limit of detection |
|---------|-------------------------|----------|---|--------|--------------------------------------|
| 1       | pH                      | -        | IS: 2720 (Part - 26):1987<br>Reaffirmed: 2021 | 7.4    | 1 - 14                               |
| 2       | Electrical Conductivity | µmhos/cm | IS: 14767: 2000<br>Reaffirmed: 2021           | 314.0  | 1 - 40000                            |
| 3       | Moisture content        | %        | IS: 2720 (Part - 02):1973<br>Reaffirmed: 2020 | 2.98   | 1.0 - 50                             |
| 4       | Sulphur                 | Kg/Hec   | IS: 14685: 1999<br>Reaffirmed: 2019           | 13.26  | 5.0 - 100                            |
| 5       | Boron                   | mg/kg    | Method Manual of Soil Testing in India        | BDL    | 4.0 - 100                            |
| 6       | Copper                  | mg/kg    | Method Manual of Soil Testing in India        | 0.33   | 0.3 - 500                            |
| 7       | Zinc                    | mg/kg    | Method Manual of Soil Testing in India        | 16.82  | 1.0 - 500                            |
| 8       | Iron                    | mg/kg    | Method Manual of Soil Testing in India        | 118.4  | 5.0 - 500                            |
| 9       | Manganese               | mg/kg    | Method Manual of Soil Testing in India        | 8.26   | 5.0 - 500                            |

BDL=Below Detection Limit

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Lab-Incharge



Authorized Signatory  
(Ritu Garg)  
QM

## आम सूचना

आप सभी को सूचित किया जाता है कि पर्यावरण वन एवं जलवायु परिवर्तन मन्त्रालय द्वारा डी.एस.एम. शुगर मिल्स लिमिटेड, मीरगंज (धामपुर शुगर मिल्स लिमिटेड की इकाई), ग्राम - नगरिया सादत, बर्डांक एवं तहसील मीरगंज, जिला बरेली (उ.प्र.) को ई.सी.० आईडीनिफिकेशन नं. EC23B025UP120189 दिनांक 27.03.2023 के द्वारा वर्तमान चीनी इकाई क्षमता में विस्तारीकरण 5000 टी.सी.डी. से 11000 टी.सी.डी. तथा सह ऊर्जा प्लांट क्षमता 43.5 मेगावाट को पर्यावरण स्वीकृति प्रदान की है। पर्यावरण वन एवं जलवायु परिवर्तन मन्त्रालय द्वारा जारी पर्यावरण स्वीकृत की प्रति विभाग की वेबसाईट <http://moef.nic.in> (<http://environmentclearance.noc.in>) एवं उत्तर प्रदेश नियन्त्रण बोर्ड के पास उपलब्ध है।

म. डी. एस. एम. शुगर मिल्स लिमिटेड ए मीरगंज  
(धामपुर शुगर मिल्स लिमिटेड की इकाई), ग्राम - नगरिया सादत बर्डांक एवं तहसील -  
मीरगंज, जिला- बरेली (उ.प्र.)

## PUBLIC NOTICE

This is to inform all of you that M/s DSM Sugar, Meerganj (A Unit of Dhampur Sugar Mills Limited), Sugar Division, village - Nagaria Sadat, Block & Tehsil: Meerganj, District- Bareilly (UP) has been granted EC with identification no. EC23B025UP120189 dated 27/03/2023, by the Ministry of Environment Forest and Climate Change. Environment clearance has been given to expansion of existing Sugar unit from 5000 TCD to 11000 TCD along with 43.5 MW Co gen power plant. A copy of the environmental clearance issued by the Ministry of Environment, Forest and Climate Change is available on the website of the department <http://moef.nic.in> (<http://environmentclearance.noc.in>) and with the Uttar Pradesh Pollution Control Board.

M/s DSM Sugar, Meerganj  
(A Unit of Dhampur Sugar Mills Limited) Village - Nagaria Sadat,  
Block & Tehsil: Meerganj, District- Bareilly (UP)

## PUBLIC NOTICE

This is to inform all of you that M/s DSM Sugar, Meerganj (A Unit of Dhampur Sugar Mills Limited), Sugar Division, village - Nagaria Sadat, Block & Tehsil: Meerganj, District- Bareilly (UP) has been granted EC with identification no. EC23B025UP120189 dated 27/03/2023, by the Ministry of Environment Forest and Climate Change. Environment clearance has been given to expansion of existing Sugar unit from 5000 TCD to 11000 TCD along with 43.5 MW Co gen power plant. A copy of the environmental clearance issued by the Ministry of Environment, Forest and Climate Change is available on the website of the department <http://moef.nic.in> (<http://environmentclearance.noc.in>) and with the Uttar Pradesh Pollution Control Board.

**M/s DSM Sugar, Meerganj  
(A Unit of Dhampur  
Sugar Mills Limited)**  
**Village - Nagaria Sadat,  
Block & Tehsil: Meerganj,  
District- Bareilly (UP)**