Dhampur Bio Organics Limited



Date: 31.05.2024

To,

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

Subject: Six Monthly Compliance Report of Environmental Clearance for proposed expansion of existing Sugar unit from 9000 TCD to 14000 TCD without change in existing co gen power capacity 41.0 MW within existing industry premises by M/s Dhampur Bio Organics Limited, (Unit: Asmoli, Division: Sugar), at village-Asmoli, Tehsil & District—Sambhal, Uttar Pradesh for the period of October, 2023 to March-2024.

EC Identification No. EC23B025UP167115 (File No. 7801-7491), dated June 22nd, 2023

Reg: Submission of Six-Monthly Compliance Report for Period of October, 2023 to March-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 proposed expansion of existing Sugar unit from 9000 TCD to 14000 TCD without change in existing co gen power capacity 41.0 MW within existing industry premises by M/s Dhampur Bio Organics Limited, (Unit: Asmoli, Division: Sugar), at village-Asmoli, Tehsil & District—Sambhal, Uttar Pradesh for the period of October, 2023 to March-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

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

Thanking You, Your's sincerely

M/s Dhampur Bio-organics Limited

(Unit: Asmoli, Division: Sugar)

Authorized Signatory

EC Compliance October, 2023 to March, 2024

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

(October, 2023 to March, 2024)

For

PROPOSED EXPANSION OF EXISTING SUGAR UNIT FROM 9,000 TCD TO 14,000 TCD WITHOUT CHANGE IN EXISTING CO GEN POWER CAPACITY - 41 MW

By
M/s Dhampur Bio Organics Limited
Unit: Asmoli, Division: Sugar

At

Village: Asmoli, Tehsil & District: Sambhal, Uttar Pradesh

For Submission to:
Ministry of Environment, Forest & Climate Change
(Regional Office, Lucknow)

Submitted By:

M/s Dhampur Bio Organics Limited

Unit: Asmoli, Division: Sugar

EC Compliance October, 2023 to March, 2024

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EC Compliance October, 2023 to March, 2024

CHAPTER No. 01: INTRODUCTION AND PROJECT DESCRIPTION

Six monthly environmental compliance/status report is submitted for Proposed Expansion of existing Sugar unit from 9000 TCD to 14000 TCD without change in existing co gen power capacity - 41 MW within existing industry premises by M/s Dhampur Bio Organics Limited, Unit: Asmoli, Division: Sugar for October, 2023 to March, 2024. The Project is located at Village: Asmoli, Tehsil & District: Sambhal (U.P.). Prior Environment Clearance was obtained from State Level Environment Impact Assessment Authority, Uttar Pradesh wide EC Identification No. EC23B025UP167115, dated 22nd June, 2023. Consolidated Consent & Authorization obtained for the project Vide Ref No.-191014/UPPCB/Moradabad(UPPCBRO)/CTO/both/SAMBHAL/2023, dated 04/09/2023 for validity upto 31/12/2024. Copy of CTO is attached here as Annexure-1. Currently unit is running at capacity – 12500 TCD and co gen power capacity 41 MW.

Environmental mitigation measures described in Environmental Management Plan are being implemented during operation phase. M/s Dhampur Bio Organics Limited, Unit: Asmoli, 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 **October**, **2023 to March**, **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.

EC Compliance October, 2023 to March, 2024

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

Name of the Project: Proposed Expansion of existing Sugar unit from 9000 TCD to 14000 TCD without change in existing co gen power capacity - 41 MW within existing industry premises at village: Asmoli, Tehsil & District: Sambhal (U.P.). by M/s Dhampur Bio Organics Limited, Unit: Asmoli, Division: Sugar.

EC Identification No. EC23B025UP167115, dated 22nd June, 2023.

Pe	Period of Compliance Report: October, 2023 to March, 2024.		
Sr. No.	Condition	Reply	
	SPECIFIC CONDITION:		
i.	Discharge should be as per MoEF&CC Guidelines.	Point is noted and same is being complied. Discharge of treated waste water is within stipulated standard as per GSR 35(E).	
ii.	PP shall install CAAQMS.	PP has installed CAAQMS at process stacks.	
iii.	Disposal of fly ash shall be done within the premises.	Fly ash generated is being provided to brick manufacturer.	
iv.	Three tier green belt shall be developed with native species all along the periphery of the project. Site survival rate of green belt developed shall be monitored on periodic basis to ensure that damaged plants are replaced with new plants in the subsequent years (Miyawaki method to be adopted for plantation).	Green belt has been already developed within premises. Appox 33 % area has been developed as green belt and it shall be maintained.	
v.	Performance test shall be conducted on all pollution control system every year and report shall be submitted to Regional office of the MoEF and CC.	Point is noted and complied.	
vi.	Greening and paving shall be implemented in the plant area to arrest soil erosion and dust pollution exposed soil surface.	Greening and paving is being implemented in the plant area to arrest soil erosion and dust pollution exposed soil surface.	
vii.	Properly covered vehicles shall be used while transporting material and product.	Covered trucks are being utilised in transportation of Bagasse and Fly ash.	
viii.	Allergy test should also be included in health checkup of works.	Health check-up of employee has been done on regular basis. Employee health status report is	

		attached as Annexure-3.
ix.	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.	Industry is comply with the CPCB charter guidelines for sugar units and treated water is being used for the different purposes as per the requirement in industry, irrigation purpose and surplus treated water is being discharge as per GSR 35(E).
	STANDARD ENVIRONMENTAL CLEARAN	NCE 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 nonforest 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. Copy of CTO (Air & water) is enclosed as Annexure-1.
V	The project proponent shall obtain authorization under	Hazardous waste generated will be
	the Hazardous and other Waste Management Rules, 2016 as amended from time to time.	disposed as per the Hazardous Waste Management Rules 2016. Copy of Hazardous Waste Authorisation as Annexure-1
vi	The company shall strictly comply with the rules and	Point is noted and same shall be

	guidelines under Manufacture, Storage and import of	implemented as per rules and
	Hazardous Chemicals (MSIHC) Rules, 1989 as	guidelines under Manufacture,
	amended time to time. All transportation of Hazardous	Storage and import of Hazardous
	Chemicals shall be as per the Motor Vehicle Act	Chemicals (MSIHC) Rules, 1989
	(MVA), 1989.	as amended time to time.
II	Air Quality Monitoring and Preservation:	
i	The project proponent shall install 24x7 continuous	Unit has installed 24 x 7
	emission monitoring system at process stacks to	continuous emission monitoring
	monitor stack emission with respect to standards	system at process stacks.
	prescribed in Environment (Protection) Rules 1986	Photographs attached as
	and connect to SPCB and CPCB online servers and	Annexure-5.
	calibrate these systems 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	Point is noted and Four locations
	Ambient Air Quality monitoring for common/criterion	for ambient air quality monitoring
	parameters relevant to the main pollutants released	has been identified. Monitoring
	(e.g. PM_{10} and $PM_{2.5}$ in reference to PM emission, and	has been done at identified sites.
	SO ₂ and NO _X in reference to SO ₂ and NO _X emissions)	Monitoring report enclosed as
	within and outside the plant area at least at four	Annexure-6.
	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	Stack monitoring has been done by
	report of continuous stack emission and air quality	third party monitoring at the time
	monitoring and results of manual stack monitoring and	of industry operation.
	manual monitoring of air quality /fugitive emissions to	Emission monitoring report is
	Regional Office of MoEF&CC, Zonal office of CPCB	attached as Annexure - 6.
	and Regional Office of SPCB along with six monthly	
	monitoring report.	
iv	Appropriate Air Pollution Control (APC) system shall	Wet Scrubber and common stack
	be provided for all the dust generating points including	height of 60 meter from ground
	fugitive dust from all vulnerable sources, so as to	level at the boiler of 70 TPH and
	comply prescribed stack emission and fugitive	50 TPH and Wet Scrubber and
	emission standards.	stack height of 72 meter from
		ground level at the boiler of 170 TPH.
		Emission from stack is within
		CPCB standard.
V	The National Ambient Air Quality Emission Standard	Ambient air quality monitoring has
	issued by the Ministry vide G.S.R No. 826(E) dated	been done at four locations. Test
	16 th November, 2009 shall be complied with.	report enclosed as Annexure-6 .

vi	Sulphur content should not exceed 0.5% in the coal for	Point is noted and only Bagasse is
	use in coal fired boilers to control particulate	being used as fuel in Boiler. In
	emissions within permissible limits (as applicable).	Bagasse, sulphur level is
	The gaseous emissions shall be dispersed through	negligible.
	stack of adequate height as per CPCB/ SPCB	
	guidelines.	
vii	The D.G. sets shall be equipped with suitable pollution	Adequate Stack height has been
	control devices and the adequate stack height so that	provided.
	the emissions are in conformity with the extant	
	regulations and the guidelines in this regards.	
viii	Storage of raw materials, coal etc shall be either stored	This is Sugar Cane Crushing unit.
	in silos or in covered areas to prevent dust pollution	Bagasse is being stored in specific
	and their other fugitive emissions.	area and covered shed has been
		provided.
III	Water Quality Monitoring and Preservation	
i	For online continuous monitoring of effluent, the unit	Continuous online monitoring
	shall install web camera with night vision capability	system has been installed and
	and flow meters in the channel/drain carrying effluent	connected to CPCB & SPCB
	within the premises (applicable in case of the projects	online server.
	achieving ZLD) and connected to SPCB and CPCB	
	online servers.	
ii	Process effluent / any wastewater shall not be allowed	Separate storm water drain has
	to mix with storm water. The storm water from the	been provided. Storm water from
	premises shall be collected and discharged through a	the premises shall be collected and
	separate conveyance system.	discharged.
iii	The effluent discharge shall conform to the standards	Point is noted and same is being
	prescribed under the Environment (Protection) Rules,	complied. Generation of waste
	1986, or as specified by the State Pollution Control	water and discharge of treated
	Board while granting Consent under the Air/ Water	waste water is being discharged as
	Act, whichever is more stringent.	per UPPCB and CPCB norms.
1	Total fresh motor requirement shall not as a 1-11	After communicate for the
iv	Total fresh water requirement shall not exceed the	After expansion fresh water
	proposed quantity or as specified by the Committee.	requirement has been 980 KLD
	Prior permission shall be obtained from the concerned	and same is being abstracted. NOC
	regulatory authority/ CGWA in this regard.	for ground water abstraction has
		been obtained. Copy of the same is
***	Generated effluent shall be treated in ETP and treated	attached. This is sugar unit therefore;
V		,
	effluent shall conform the standard under the EP Act,	wastewater generated is being
	1986/CPCB/MoEFCC and treated water from ETP	treated in ETP, which comprises of
	shall be used for irrigation.	Bar screen Oil & Grease separator,
		Anaerobic digestor, Equalisation
		tank, Aeration tank with diffused

		aeration system, Clarifier, Filter
		press.
vi	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.
IV	Noise Monitoring and Preservation	
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. Test report enclosed as Annexure-6 .
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 Test report enclosed as Annexure-6.
	1	
V	Energy Conservation Measures	
i	Energy Conservation Measures The energy sources for lighting purpose shall preferably by LED based.	The unit already preferred and installed LED Lighting in the campus for proposed expansion.
	The energy sources for lighting purpose shall	installed LED Lighting in the
i VI i	The energy sources for lighting purpose shall preferably by LED based. Waste Management 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.	installed LED Lighting in the campus for proposed expansion. Hazardous chemical is being / shall be stored in drum in dedicated area and provided to TSDF and authorised recycler for further disposal.
i	The energy sources for lighting purpose shall preferably by LED based. Waste Management 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	installed LED Lighting in the campus for proposed expansion. Hazardous chemical is being / shall be stored in drum in dedicated area and provided to TSDF and authorised recycler for
i VI i	The energy sources for lighting purpose shall preferably by LED based. Waste Management 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. 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	installed LED Lighting in the campus for proposed expansion. Hazardous chemical is being / shall be stored in drum in dedicated area and provided to TSDF and authorised recycler for further disposal. No Process organic residue and spent carbon are generated. ETP sludge is being provided to farmer which is being provided to farmer and being utilised as manure. Fly ash generated is being
i ii	The energy sources for lighting purpose shall preferably by LED based. Waste Management 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. 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.	installed LED Lighting in the campus for proposed expansion. Hazardous chemical is being / shall be stored in drum in dedicated area and provided to TSDF and authorised recycler for further disposal. No Process organic residue and spent carbon are generated. ETP sludge is being provided to farmer which is being provided to farmer and being utilised as manure. Fly ash generated is being provided to brick manufacturer.

	ingredients to minimize waste.	flow points as per CPCB / UPPCB guidelines.
	b. Reuse of by-products from the process as ray materials or as raw material substitutes in other processes.	
	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 recover system.	Not applicable.
	f. Use of high-pressure hoses for equipment clearing to reduce wastewater generation.	g Complied.
VII	Green Belt	
i.	Green belt shall be developed in an area equal to 33% of the plant area with a native tree species is accordance with CPCB guidelines. The greenbelt shall inter alia cover the entire periphery of the plant.	n provided as Green Belt.
VIII	Safety, Public Hearing and Human Health Issues	
i	Emergency preparedness plan based on the Hazar 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.	Personal Protection Equipment (PPE) like Gogles, safety boots, safety helmets etc.
iii	Training shall be imparted to all employees on safet and health aspects of chemicals handling. Pre employment and routine periodical medical examinations for all employees shall be undertaken or regular basis. Training to all employees on handling of chemicals shall be imparted.	concerning employees on safety and health aspects of chemicals handling.
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.	facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, creche etc has been provided
V	Occupational health surveillance of the workers shall be done on a regular basis and records maintained a per the Factories Act.	_
vi	There shall be adequate space inside the plan	

	premises earmarked for parking of vehicles for raw	provided and same will be utilised
	materials and finished products. And no parking to be	after expansion.
	allowed outside on public places.	
IX	Corporate Environmental Responsibility	
i	The project proponent shall comply with the	Point is noted and same will be
	provisions contained in this Ministry's OM vide F.No.	complied.
	22-65/2017-IA.III dated 1st May 2018, as applicable,	
	regarding Corporate Environment Responsibility.	
ii	The company shall have a well laid down	The company is having an
	environmental policy duly approve by the Board of	environmental policy duly approve
	Directors. The environmental policy should prescribe	by the Board of Directors.
	for standard operating procedures to have proper	Environmental policy of the
	checks and balances and to bring into focus any	company is attached as Annexure
	infringements/ deviation/ violation of the	<mark>-9.</mark>
	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	The unit has organized an
	company head quarter level, with qualified personnel	Environmental Cell to take care of
	shall be set up under the control of senior Executive,	all concerning stipulated
	who will directly to the head of the organization.	conditions regarding environment.
iv	Action plan for implementing EMP and environmental	Point is noted and complied.
	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.	Doint is noted and some 11-4
V	Self-environmental audit shall be conducted annually.	Point is noted and complied.
	Every three years third party environmental audit shall be carried out.	
v		
X	Miscellaneous The project proponent shall make public the	The copy of published information
i	The project proponent shall make public the	The copy of published information (in payage parts) regarding great of
	environmental clearance granted for their project along	(in newspapers) regarding grant of
	with the environmental conditions and safeguards at	Environmental Clearance is
	their cost by prominently advertising it at least in two	enclosed here with as Annexure-

	local newspapers of the District or State, of which one	9.
	shall be in the vernacular language within seven days	
	and in addition this shall also be displayed in the	
ii	project proponent's website permanently.	The coming of the environmental
11	The copies of the environmental clearance shall be submitted by the project proponents to the Heads of	The copies of the environmental clearance is being submitted to the
	local bodies, Panchayats and Municipal Bodies in	Heads of local bodies, Panchayats
	addition to the relevant offices of the Government who	freads of local bodies, Fanchayats
	in turn has to display the same for 30 days from the	
	date of receipt.	
iii	The project proponent shall upload the status of	Condition noted and will be
111	compliance of the stipulated environment clearance	complied.
	conditions, including results of monitored data on their	complica.
	website and update the same on half-yearly basis.	
iv	The project proponent shall monitor the criteria	Environmental display board has
	pollutants level namely; PM ₁₀ , SO ₂ , NO _X (ambient	been installed at the gate of
	levels as well as stack emissions) or critical sectoral	industry. Photograph of the same
	parameters, indicated for the projects and display the	is attached as Annexure - 10.
	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	Point is noted and Complied.
	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	Unit has submitted environmental
	statement for each financial year in Form-V to the	statement in Form-V as per
	concerned State Pollution Control Board as prescribed	schedule.
	under the Environment (Protection) Rules, 1986, as	
	amended subsequently and put on the website of the	
<u> </u>	company.	
vii	The project proponent shall inform the Regional	Financial closure of the sugar
	Office as well as the Ministry, the date of financial	factory is 31 st March of every year.
	closure and final approval of the project by the	
	concerned authorities, commencing the land	
	development work and start of production operation	
viii	by the project. The project authorities must strictly adhere to the	Point is noted and will be
VIII	stipulations made by the State Pollution Control Board	complied.
	and the State Government.	Complicu.
ix	The project proponent shall abide by all the	Condition noted and complied.
1X	commitments and recommendations made in the EIA/	Condition noted and complied.
	EMP report, commitment made during Public Hearing	
	Livit Toport, communicit made during Fublic Hearing	

	and also that during their presentation to the Expert Appraisal Committee.	
X	No further expansion or modifications in the plant	Point is noted and agreed.
Λ	shall be carried out without prior approval of the	Tollit is noted and agreed.
	1 11	
	Ministry of Environment, Forests and Climate Change	
	(MoEF&CC).	
xi	Concealing factual data or submission of false/	No any Concealing of factual data
	fabricated data may result in revocation of this	has been done.
	environmental clearance and attract action under the	
	provisions of Environment (Protection) Act, 1986.	
xii	The Ministry may revoke or suspend the clearance, if	Condition noted and agreed.
	implementation of any of the above conditions is not	
	satisfactory.	
xiii	The Ministry reserves the right to stipulate additional	Condition noted and agreed.
	conditions if found necessary.	
xiv	The Company in a time bound manner shall	Condition noted and agreed.
	implement these conditions.	
XV	The Regional Office of this Ministry shall monitor	Condition noted and agreed.
	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	Condition noted and agreed.
	under the provisions of the Water (Prevention &	C
	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	Condition noted and agreed.
AVII	Green Tribunal, if preferred, within a period of 30	Condition noted and agreed.
	days as prescribed under Section 16 of the National	
	Green Tribunal Act, 2010.	

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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 Residential Colony (A - Block), Boiling House Near Dryer House, Co-Gen Area Near D.M. Plant and Near ETP 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-3.1**:-

Table-3.1:
Details of Ambient Air Quality Monitoring Stations

Sr.	Location	Location Name/	Environmental Setting	Date of
No.	Code	Description	of surrounding	Monitoring
1.	AAQ - 01	Residential Colony	Industrial	15.02.2024 to
1.	AAQ - 01	(A - Block)	musurar	16.02.2024
2.	AAQ - 02	Boiling House Near	Residential	15.02.2024 to
4.	AAQ - 02	Dryer House	Residential	16.02.2024
3.	Co-Gen Area Near		Industrial	16.02.2024 to
3.	AAQ - 03	D.M. Plant	iliuusutat	17.02.2024
4.	AAO - 04 Near ETP		Industrial	16.02.2024 to
	AAQ - 04	Near ETF	muusutat	17.02.2024

AAQ - 01: Residential Colony (A - Block)

The sampler was placed Residential Colony (A - Block) and was free from any obstructions. Surroundings of the sampling site represent industrial environmental setting.

AAQ - 02: Boiling House Near Dryer House

The sampler was placed at Residential Colony (A - Block) and was free from any obstructions. Surroundings of the sampling site represent residential environmental setting.

AAQ - 03: Co-Gen Area Near D.M. Plant

The sampler was placed at Boiling House Near Dryer House and was free from any obstructions. Surroundings of the sampling site represent industrial environmental setting.

AAO - 04: Near ETP

The sampler was placed at Co-Gen Area Near D.M. Plant 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 (PM₁₀)
- Fine Particulate Matter (PM_{2.5})
- Sulphur Dioxide (SO₂)
- Oxides of Nitrogen (NO_X)

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The duration of sampling of PM_{10} , $PM_{2.5}$, SO_2 and NO_X 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_{2.5} i.e. <2.5 microns), and Respirable Dust Sampler with gaseous sampling attachment was used for sampling Respirable fraction (<10 microns), gaseous pollutants like SO₂, and NOx.

Table-3.2:
Techniques used for Ambient Air Quality Monitoring

Sr. No	Parameter	Technique	Range of testing /limit of detection
1.	Respirable Suspended Particulate Matter (PM ₁₀)	Respirable Dust Sampler, with cyclone separator, Gravimetric Method	5.0 - 1200
2.	Fine Particulate Matter (PM _{2.5})	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 Residential Colony (A - Block) The detailed on-site monitoring results of $PM_{2.5}$, PM_{10} , SO_2 and NO_X are presented in **Table-3.3**.

Table-3.3: Ambient Air Quality Monitoring Results Near Residential Colony (A - Block)

	Timble till Quanty Monteoling Results Near Residential Colony (IT Block)					
Sr. No.	Particulars	Protocol	Unit	Result	Standard as per NAAQS: dated 18/11/ 2009	
1	Particulate matters size	IS: 5182 (Part-23): 2006, RA: 2022	μg/m³	77.5	For 24 hour = 100	
	less than 10 μm (PM ₁₀)	, , ,	10			
2	Particulate matters size	IS: 5182 (Part-24): 2019	μg/m³	49.77	For 24 hour = 60	
	less than 2.5 μm (PM _{2.5})	10. 5102 (1 411-24). 2019	μg/ 111	47.11	101 24 11041 - 00	
3	Sulphur Dioxide (SO ₂)	IS: 5182 (Part-02): 2001, RA: 2022	μg/m³	13.58	For 24 hour = 80	
4	Oxides of Nitrogen (NO _x)	IS: 5182 (Part-06): 2006, RA: 2022	μg/m³	19.20	For 24 hour = 80	
5	Carbon Monoxide (CO)	IS: 5182 (Part-10): 1999, RA: 2019	mg/m³	0.51	For $08 \text{ hour} = 02$	
6	Ozone (O ₃)	IS: 5182 (Part-09): 1974, RA: 2019	μg/m³	BDL	For 01 hour = 180	
7	Ammonia (NH ₃)	IS: 5182 (Part-25): 2018	μg/m³	20.05	For 24 hour = 400	
8	Lead (Pb)	IS: 5182 (Part-22): 2004, RA: 2019	μg/m³	BDL	For 24 hour = 01	
9	Benzene (C ₆ H ₆)	IS: 5182 (Part-11): 2006, RA: 2022	μg/m³	BDL	Annual = 05	
10	Nickel (Ni)	IS: 5182 (Part-26): 2020	ng/m³	BDL	Annual = 20	
11	Arsenic (As)	EPA/625/R-96/010a;USEPA IO 3.2	ng/m³	BDL	Annual = 06	
12	Benzo (a) Pyrine – particulate phase only	IS: 5182 (Part-12): 2004, RA: 2019	ng/m³	BDL	Annual = 01	

3.1.4 Ambient Air Quality Monitoring Results at Boiling House Near Dryer House

The detailed on-site monitoring results of $PM_{2.5}$, PM_{10} , SO_2 and NOx are presented in **Table-3.4**.

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Table-3.4: Ambient Air Quality Monitoring Results Boiling House Near Dryer House

Sr. No.	Particulars	Protocol	Unit	Result	Standard as per NAAQS: dated 18/11/2009
1	Particulate matters size less than 10 µm (PM ₁₀)	IS: 5182 (Part-23): 2006, RA: 2022	μg/m³	82.4	For 24 hour = 100
2	Particulate matters size less than 2.5 µm (PM _{2.5})	IS: 5182 (Part-24): 2019	μg/m³	50.51	For 24 hour = 60
3	Sulphur Dioxide (SO ₂)	IS: 5182 (Part-02): 2001, RA: 2022	μg/m³	14.64	For $24 \text{ hour} = 80$
4	Oxides of Nitrogen (NO _x)	IS: 5182 (Part-06): 2006, RA: 2022	$\mu g/m^3$	20.10	For $24 \text{ hour} = 80$
5	Carbon Monoxide (CO)	IS: 5182 (Part-10): 1999, RA: 2019	mg/m³	0.50	For $08 \text{ hour} = 02$
6	Ozone (O ₃)	IS: 5182 (Part-09): 1974, RA: 2019	$\mu g/m^3$	BDL	For 01 hour = 180
7	Ammonia (NH3)	IS: 5182 (Part-25): 2018	$\mu g/m^3$	21.06	For $24 \text{ hour} = 400$
8	Lead (Pb)	IS: 5182 (Part-22): 2004, RA: 2019	μg/m³	BDL	For 24 hour = 01
9	Benzene (C ₆ H ₆)	IS: 5182 (Part-11): 2006, RA: 2022	μg/m³	BDL	Annual = 05
10	Nickel (Ni)	IS: 5182 (Part-26): 2020	ng/m³	BDL	Annual = 20
11	Arsenic (As)	EPA/625/R-96/010a;USEPA IO 3.2	ng/m³	BDL	Annual = 06
12	Benzo (a) Pyrine – particulate phase only	IS: 5182 (Part-12): 2004, RA: 2019	ng/m³	BDL	Annual = 01

3.1.5 Ambient Air Quality Monitoring Results at Co-Gen Area Near D.M. Plant

The detailed on-site monitoring results of $PM_{2.5}$, PM_{10} , SO_2 and NOx are presented in **Table-3.5**.

Table-3.5: Ambient Air Quality Monitoring Results Co-Gen Area Near D.M. Plant

Sr. No.	Particulars	Protocol	Unit	Result	Standard as per NAAQS: dated 18/11/2009
1	Particulate matters size less than 10 µm (PM ₁₀)	IS: 5182 (Part-23): 2006, RA: 2022	μg/m³	82.5	For 24 hour = 100
2	Particulate matters size less than 2.5 µm (PM _{2.5})	IS: 5182 (Part-24): 2019	μg/m³	50.45	For 24 hour = 60
3	Sulphur Dioxide (SO ₂)	IS: 5182 (Part-02): 2001, RA: 2022	μg/m³	14.12	For $24 \text{ hour} = 80$
4	Oxides of Nitrogen (NOx)	IS: 5182 (Part-06): 2006, RA: 2022	μg/m³	20.24	For $24 \text{ hour} = 80$
5	Carbon Monoxide (CO)	IS: 5182 (Part-10): 1999, RA: 2019	mg/m ³	0.50	For $08 \text{ hour} = 02$
6	Ozone (O ₃)	IS: 5182 (Part-09): 1974, RA: 2019	μg/m³	BDL	For 01 hour = 180
7	Ammonia (NH ₃)	IS: 5182 (Part-25): 2018	μg/m³	21.10	For $24 \text{ hour} = 400$
8	Lead (Pb)	IS: 5182 (Part-22): 2004, RA: 2019	μg/m³	BDL	For 24 hour = 01
9	Benzene (C ₆ H ₆)	IS: 5182 (Part-11): 2006, RA: 2022	μg/m³	BDL	Annual = 05
10	Nickel (Ni)	IS: 5182 (Part-26): 2020	ng/m³	BDL	Annual = 20
11	Arsenic (As)	EPA/625/R-96/010a;USEPA IO 3.2	ng/m³	BDL	Annual = 06
12	Benzo (a) Pyrine – particulate phase only	IS: 5182 (Part-12): 2004, RA: 2019	ng/m³	BDL	Annual = 01

3.1.6 Ambient Air Quality Monitoring Results at Near ETP

The detailed on-site monitoring results of $PM_{2.5}$, PM_{10} , SO_2 and NOx are presented in **Table-3.6**.

Table-3.6: Ambient Air Quality Monitoring Results at Near ETP

Sr. No.	Particulars	Protocol	Unit	Result	Standard as per NAAQS: dated 18/11/2009
1	Particulate matters size less than 10 µm (PM ₁₀)	IS: 5182 (Part-23): 2006, RA: 2022	μg/m³	79.4	For 24 hour = 100
2	Particulate matters size less than 2.5 µm (PM _{2.5})	IS: 5182 (Part-24): 2019	μg/m³	47.78	For 24 hour = 60

3	Sulphur Dioxide (SO ₂)	IS: 5182 (Part-02): 2001, RA: 2022	μg/m³	13.91	For $24 \text{ hour} = 80$
4	Oxides of Nitrogen (NO _x)	IS: 5182 (Part-06): 2006, RA: 2022	$\mu g/m^3$	19.85	For $24 \text{ hour} = 80$
5	Carbon Monoxide (CO)	IS: 5182 (Part-10): 1999, RA: 2019	mg/m ³	0.50	For $08 \text{ hour} = 02$
6	Ozone (O ₃)	IS: 5182 (Part-09): 1974, RA: 2019	μg/m³	BDL	For 01 hour = 180
7	Ammonia (NH ₃)	IS: 5182 (Part-25): 2018	μg/m³	21.18	For $24 \text{ hour} = 400$
8	Lead (Pb)	IS: 5182 (Part-22): 2004, RA: 2019	μg/m³	BDL	For $24 \text{ hour} = 01$
9	Benzene (C ₆ H ₆)	IS: 5182 (Part-11): 2006, RA: 2022	$\mu g/m^3$	BDL	Annual = 05
10	Nickel (Ni)	IS: 5182 (Part-26): 2020	ng/m³	BDL	Annual = 20
11	Arsenic (As)	EPA/625/R-96/010a;USEPA IO 3.2	ng/m³	BDL	Annual = 06
12	Benzo (a) Pyrine – particulate phase only	IS: 5182 (Part-12): 2004, RA: 2019	ng/m³	BDL	Annual = 01

3.1.7 Discussion on Ambient Air Quality in the Study Area

The value of PM₁₀ at Ambient Air Monitoring at all 04 locations are 77.5 μ g/m³, 82.4 μ g/m³, 82.5 μ g/m³ & 79.4 μ g/m³ respectively which were within permissible limit of 100 μ g/m³ and PM_{2.5} levels are 49.77 μ g/m³ Residential Colony (A - Block), 50.51 μ g/m³ Boiling House Near Dryer House, 50.45 μ g/m³ at Co-Gen Area Near D.M. Plant and 47.78 μ g/m³ at Near ETP, were also observed within permissible limit of 60 μ g/m³ (for residential, rural and other areas as stipulated in the National Ambient Air Quality Standards). SO₂ ranges between 13.58 μ g/m³ to 14.64 μ g/m³ and NO_X ranges between 19.20 μ g/m³ to 20.24 μ g/m³ was also observed within the corresponding stipulated limits (Limit for SO₂ and NO_X; 80 μ g/m³) 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**.

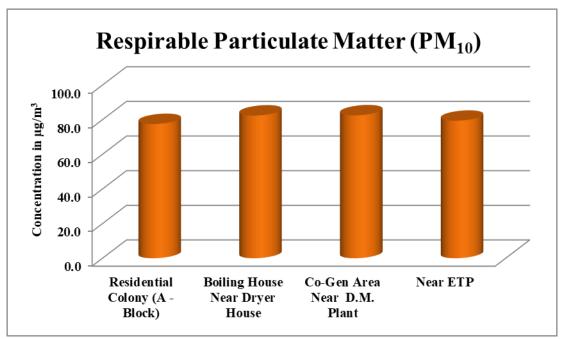


Figure-3.1: Graphs Showing PM₁₀ Concentration at all sites

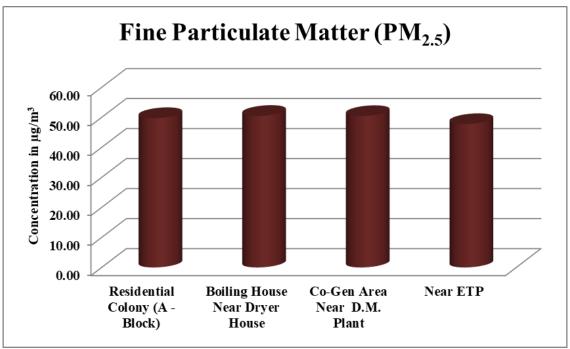


Figure-3.2: Graphs Showing PM_{2.5} Concentration at all sites

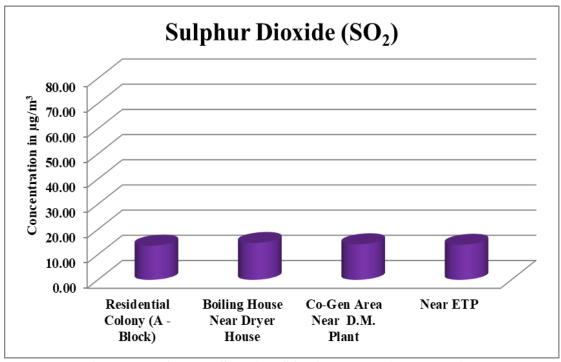


Figure-3.3: Graphs Showing SO₂ Concentration at all sites

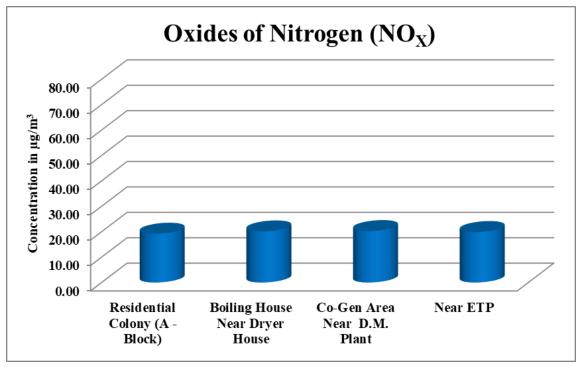


Figure-3.4: Graphs Showing NO_X Concentration at all sites

3.2 STACK EMISSION MONITORING

Stack Emission monitoring was carried out by EPA approved Laboratory on date 16.02.2024 for stack attached with 170 TPH and 70 TPH existing boiler (ESP & Wet scrubber is used as Air Pollution Control Device with a stack height of 72.0 meter & 60.0 meter).

3.2.1 Stack Emission Monitoring Methodology

Monitoring was conducted in respect of the following parameters:

• Particulate Matter (PM)

The Method used for Stack Emission monitoring and range of testing with CPCB standard are given in **Table-3.7** (**A-B**)

Table-3.7 (A). Details of Stack Emission Monitoring Result Stack-1

Sr. No.	Parameter	Unit	Protocol	Result	Range of Testing/ Limit of Detection	Standard (as per CPCB)
1	Particulate Matter	mg/Nm ³	IS: 11255 (Part-01): 1985 Reaffirmed: 2019	80.5	2.0 - 1000	150
2	Sulphur Dioxide (SO ₂)	mg/Nm ³	IS: 11255 (Part-02): 1985 Reaffirmed: 2019	4.9	1.0 - 2000	-
3	Oxide of Nitrogen (NOx)	mg/Nm ³	IS: 11255 (Part-07): 1985 Reaffirmed: 2019	28.0	2.0 - 1000	-

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Table-3.7 (B).: Details of Stack Emission Monitoring Result Stack-2

Sr. No.	Parameter	Unit	Protocol	Result	Range of Testing/ Limit of Detection	Standard (as per CPCB)
1	Particulate Matter	mg/Nm ³	IS: 11255 (Part-01): 1985 Reaffirmed: 2019	79.6	2.0 - 1000	150
2	Sulphur Dioxide (SO ₂)	mg/Nm ³	IS: 11255 (Part-02): 1985 Reaffirmed: 2019	4.8	1.0 - 2000	-
3	Oxide of Nitrogen (NOx)	mg/Nm ³	IS: 11255 (Part-07): 1985 Reaffirmed: 2019	24.0	2.0 - 1000	-

3.3 AMBIENT NOISE MONITORING

3.3.1 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

Sr.	Location	Location name	Date of Monitoring
No	Code	and description	Date of Womtoring
1.	NQ - 01	Near 70 TPH Area	
2.	NQ - 02	Near 170 TPH area	15/02/2024 to 17/02/2023
3.	NQ - 03	30 MW Turbine Floor	

3.3.2 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.

3.3.3 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

	Ambient Noise Level					
Sr. No.	Locations	Unit	Results Day Time (06:00 AM - 10:00 PM)	Results Night Time (10:00 PM - 06:00 AM)		
1.	Near 70 TPH Area	dB(A)	65.2	56.8		
2.	Near 170 TPH area	dB(A)	65.1	57.2		
3.	30 MW Turbine Floor	dB(A)	70.5	67.3		

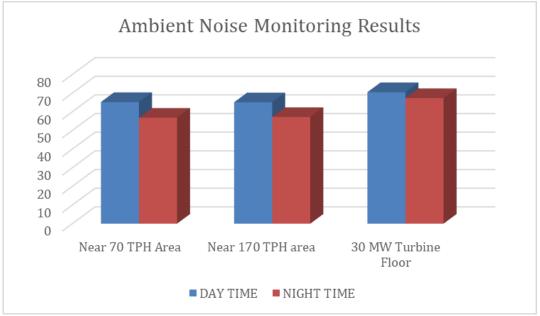


Figure-3.5: Day and Night Time noise Level at all Monitoring Locations

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Area	Category of	Limits in dB(A) Leq					
Code	Area/Zone	Day Time	Night Time				
A	Industrial Area	75	70				
В	Commercial Area	65	55				
C	Residential Area	55	45				
B	Silence Zone	50	40				

Table-3.9: Noise Standards as per CPCB Schedule rule 3(1) and 4(1)

3.3.4 Discussion on Ambient Noise Levels in the Study Area Day Time Noise Levels (L_{day}):

The day time noise level at monitoring station was ranged from 65.1 dB(A) to 70.5 dB(A), which is within limits prescribed for industrial area i.e. 75 db(A).

Night Time Noise Levels (Lnight):

The night time noise level at monitoring station was ranged from 56.8 dB(A) to 67.3 dB(A), which is within limit prescribed for industrial area i.e. 70 dB (A).

3.4 GROUND WATER QUALITY MONITORING

3.4.1 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-3.10**.

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Table-3.10: D	Details of	Water	Ouality	Monitoring	Station
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Sr. No	Location Code	Location name and description	Date of Monitoring
1.	GW - 01	Borewell Water	05 th October, 2023
2.	GW - 02	Borewell Water	10 th November, 2023
3.	GW - 03	Borewell Water	08 th December, 2023
4.	GW - 04	Borewell Water	17 th January, 2024
5.	GW - 05	Borewell Water	14 th February, 2024
6.	GW - 06	Borewell Water	13 th March, 2024

3.4.2 Methodology of ground water Quality Monitoring

Sampling of ground water was carried out on 05.10.2023, 10.11.2023, 08.12.2023, 17.01.2024, 14.02.2024 & 13.03.2024. 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 HNO3.

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.**

3.4.3 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 (October, 2023)

Sr.	Test Parameter	Unit	nd water Quality Results at Protocol/Test Method	Result	Range of testing	Indian Standard 10500: 2012	
No					/limit of detection	Desirable	Permissible
			Physico-chemical Para				1
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	pН	-	APHA 24 th Ed. 2023 - 4500 H ⁺	7.6	1 - 14	6.5-8.5	No Relaxation
4	Turbidity	NTU	APHA 24 th Ed. 2023 - 2130 B	<2.0	2 - 40	1	5
5	Total Dissolved Solids (TDS)	mg/1 IS: 3025 (Part-16): 2023		356.8	10 - 5000	500	2000
6	Ammonia (as total ammonia-N) mg/l APHA 24 th Ed. 2023 - 4500-NH ₃ F		<0.5	0.5 - 2.0	0.5	No Relaxation	
7	Anionic Detergents (as MBAS)	mg/l	APHA 24 th Ed. 2023 - 5540 C	<0.05	0.05 - 0.5	0.2	1.0
8	Calcium as Ca	mg/l	IS: 3025 (Part-40): 1991 Reaffirmed: 2019	52.8	2.0 - 600	75	200
9	Magnesium as Mg	mg/l	APHA 24th Ed. 2023 - 3500 Mg, B	23.32	0.1 - 200	30	100
10	Chloride as Cl	mg/l	APHA 24 th Ed. 2023 - 4500-CI ⁻ B	24.0	2.0 - 2000	250	1000
11	Fluoride as F	mg/l	APHA 24 th Ed. 2023 - 4500 F ⁻ C	0.36	0.02 - 5.0	1.0	1.5
- 11	Free Residual	1115/1	IS: 3025 (Part-26): 1986	0.50	0.02 3.0	1.0	1.5
12	Chlorine	mg/l	Reaffirmed: 2019	<0.1	0.1 - 5.0	0.2	1.0
13	Nitrate as NO ₃	mg/l	IS: 3025 (Part-34): 1986 Reaffirmed: 2019	<1.0	1.0 - 70	45	No Relaxation
14	(as C ₆ H ₅ OH)	Phenolic Compound (as C ₆ H ₅ OH) mg/l APHA 24 th Ed. 2023 - 5530 C		<0.001	0.001 - 0.005	0.001	0.002
15	Sulphate as SO ₄	mg/l	mg/l APHA 24 th Ed. 2023 - 4500- SO ₄ ² -		1.0 - 500	200	400
16	Alkalinity as CaCO ₃	mg/l	APHA 24th Ed. 2023 - 2320 B	264.0	2.0 - 1000	200	600
17	Total Hardness as CaCO ₃	mg/l	APHA 24 th Ed. 2023 - 2340 C	228.0	5.0 - 800	200	600
18	Aluminium as Al	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	<0.015	0.015 - 5.0	0.03	0.2
19	Boron as B	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	<0.05	0.05 - 2.0	0.5	1.0
20	Copper as Cu	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	<0.03	0.03 - 10	0.05	1.5
21	Iron as Fe	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	0.06	0.05 - 20	0.3	No Relaxation
22	Manganese as Mn	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	0.02	0.02 - 5.0	0.1	0.3
23	Zinc as Zn	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	0.44	0.05 - 15	5	15
24	Cadmium as Cd	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	<0.003	0.003 - 2.0	0.003	No Relaxation
25	Lead as Pb	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	<0.01	0.01 - 10	0.01	No Relaxation
26	Mercury as Hg	μg/l	APHA 24 th Ed. 2023 - 3112 B	<0.5	0.5 - 1000	1.0	No Relaxation
27	Nickel as Ni	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	<0.02	0.02 - 5.0	0.02	No Relaxation
28	Arsenic as As	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	<0.02	0.02 - 2	0.01	0.05
29	Total Chromium	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	<0.03	0.03 - 5.0	0.05	No Relaxation
Microbiological Parameters							
30	E. coli	MPN/ 100 ml	IS: 1622 - 1981 Reaffirmed: 2019	Absent	≥ 2 MPN Present or Absent per 100 ml	100 n	detected in any nl sample
31	T. coli	MPN/ 100 ml	IS: 1622 - 1981 Reaffirmed: 2019	Absent	≥ 2 MPN Present or Absent per 100 ml		detected in any nl sample

Table-3.13: Ground water Quality Results at Borewell Water (November, 2023)

Sr.	Test Parameter	Unit	Protocol/Test Method	Result	Range of testing		Standard 00: 2012
No					/limit of detection	Desirable	Permissible
			Physico-chemical Para			_	
1	Colour	Hazen	IS: 3025 (Part-04): 2021	<5.0	5 - 30	5	15
3	Odour	-	IS: 3025 (Part-05): 2018 APHA 24 th Ed. 2023 - 4500 H ⁺	Agreeable	Qualitative 1 - 14	Agreeable 6.5-8.5	Agreeable No Relaxation
4	pH Turbidity	NTU	APHA 24 th Ed. 2023 - 4300 H	7.4 <2.0	2 - 40	1	5
5	Total Dissolved Solids (TDS)	mg/l	IS: 3025 (Part-16): 2023	362.4	10 - 5000	500	2000
6	Ammonia (as total ammonia-N)	mg/l	APHA 24 th Ed. 2023 - 4500-NH ₃ F	<0.5	0.5 - 2.0	0.5	No Relaxation
7	Anionic Detergents (as MBAS)	mg/l	APHA 24 th Ed. 2023 - 5540 C	<0.05	0.05 - 0.5	0.2	1.0
8	Calcium as Ca	mg/l	IS: 3025 (Part-40): 1991 Reaffirmed: 2019	49.6	2.0 - 600	75	200
9	Magnesium as Mg	mg/l	APHA 24 th Ed. 2023 - 3500 Mg, B	23.32	0.1 - 200	30	100
10	Chloride as Cl	mg/l	APHA 24 th Ed. 2023 - 4500-CI B	24.0	2.0 - 2000	250	1000
11	Fluoride as F	mg/l	APHA 24 th Ed. 2023 - 4500 F ⁻ C	0.29	0.02 - 5.0	1.0	1.5
12	Free Residual Chlorine	mg/l	IS: 3025 (Part-26): 1986 Reaffirmed: 2019	<0.1	0.1 - 5.0	0.2	1.0
13	Nitrate as NO ₃	mg/l	IS: 3025 (Part-34): 1986 Reaffirmed: 2019	<1.0	1.0 - 70	45	No Relaxation
14	Phenolic Compound (as C ₆ H ₅ OH)	mg/l	APHA 24 th Ed. 2023 - 5530 C	<0.001	0.001 - 0.005	0.001	0.002
15	Sulphate as SO ₄	mg/l	APHA 24 th Ed. 2023 - 4500- SO ₄ ² -	0.28	1.0 - 500	200	400
16	Alkalinity as CaCO ₃	mg/l	APHA 24th Ed. 2023 - 2320 B	248.0	2.0 - 1000	200	600
17	Total Hardness as CaCO ₃	mg/l	APHA 24 th Ed. 2023 - 2340 C	220.0	5.0 - 800	200	600
18	Aluminium as Al	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	<0.015	0.015 - 5.0	0.03	0.2
19	Boron as B	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	<0.05	0.05 - 2.0	0.5	1.0
20	Copper as Cu	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	<0.03	0.03 - 10	0.05	1.5
21	Iron as Fe	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	0.11	0.05 - 20	0.3	No Relaxation
22	Manganese as Mn	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	0.03	0.02 - 5.0	0.1	0.3
23	Zinc as Zn	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	0.94	0.05 - 15	5	15
24	Cadmium as Cd	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	<0.003	0.003 - 2.0	0.003	No Relaxation
25	Lead as Pb	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	<0.01	0.01 - 10	0.01	No Relaxation
26	Mercury as Hg	μg/l	APHA 24 th Ed. 2023 - 3112 B	<0.5	0.5 - 1000	1.0	No Relaxation
27	Nickel as Ni	mg/l	(ICP-OES)		0.02 - 5.0	0.02	No Relaxation
28	Arsenic as As	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	<0.02	0.02 - 2	0.01	0.05
29	Total Chromium	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	<0.03	0.03 - 5.0	0.05	No Relaxation
		3.4753.77	Microbiological Para	meters	T	G1 11 : 1	1 1 .
30	E. coli	MPN/ 100 ml	IS: 1622 - 1981 Reaffirmed: 2019	Absent	≥ 2 MPN Present or Absent per 100 ml	100 n	detected in any
31	T. coli	MPN/ 100 ml	IS: 1622 - 1981 Reaffirmed: 2019	Absent	≥ 2 MPN Present or Absent per 100 ml		detected in any nl sample

Table-3.14:
Ground water Quality Results at Borewell Water (December, 2023)

	Ground water Quality Results at Borewell Water (December, 2023)							
Sr. No	Test Parameter	Unit	Protocol/Test Method	Result	Range of testing	1050	Standard 0: 2012	
			DI			Desirable	Permissible	
1	C-1	11	Physico-chemical Para		5 20	<i>-</i>	1.5	
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 th Ed. 2023 - 4500 H ⁺	7.5	1 - 14	6.5-8.5	No Relaxation	
4	Turbidity	NTU	APHA 24 th Ed. 2023 - 2130 B	<2.0	2 - 40	1	5	
5	Total Dissolved Solids (TDS)	mg/l	IS: 3025 (Part-16): 2023	348.0	10 - 5000	500	2000	
6	Ammonia (as total ammonia-N)	mg/l	APHA 24 th Ed. 2023 - 4500-NH ₃ F	<0.5	0.5 - 2.0	0.5	No Relaxation	
7	Anionic Detergents (as MBAS)	mg/l	APHA 24 th Ed. 2023 - 5540 C	<0.05	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 24th Ed. 2023 - 3500 Mg, B	25.27	0.1 - 200	30	100	
10	Chloride as Cl	mg/l	APHA 24 th Ed. 2023 - 4500-CI ⁻ B	22.0	2.0 - 2000	250	1000	
11	Fluoride as F	U	APHA 24 th Ed. 2023 - 4500 F ⁻ C		0.02 - 5.0	1.0	1.5	
11		mg/l		0.28	0.02 - 5.0	1.0	1.5	
12	Free Residual Chlorine	mg/l	IS: 3025 (Part-26): 1986 Reaffirmed: 2019	<0.1	0.1 - 5.0	0.2	1.0	
13	Nitrate as NO ₃	ng/l IS: 3025 (Part-34): 1986 Reaffirmed: 2019		<1.0	1.0 - 70	45	No Relaxation	
14	Phenolic Compound (as C ₆ H ₅ OH) mg/l APHA 24 th Ed. 2023 - 5530 C		<0.001	0.001 - 0.005	0.001	0.002		
15	Sulphate as SO ₄	mg/l	APHA 24 th Ed. 2023 - 4500- SO ₄ ²⁻	20.0	1.0 - 500	200	400	
16	Alkalinity as CaCO ₃	mg/l	APHA 24 th Ed. 2023 - 2320 B	252.0	2.0 - 1000	200	600	
17	Total Hardness as CaCO ₃	mg/l	APHA 24 th Ed. 2023 - 2340 C	232.0	5.0 - 800	200	600	
18	Aluminium as Al	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	<0.015	0.015 - 5.0	0.03	0.2	
19	Boron as B	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	<0.05	0.05 - 2.0	0.5	1.0	
20	Copper as Cu	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	<0.03	0.03 - 10	0.05	1.5	
21	Iron as Fe	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	0.09	0.05 - 20	0.3	No Relaxation	
22	Manganese as Mn	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	0.04	0.02 - 5.0	0.1	0.3	
23	Zinc as Zn	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	0.33	0.05 - 15	5	15	
24	Cadmium as Cd	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	<0.003	0.003 - 2.0	0.003	No Relaxation	
25	Lead as Pb	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	<0.01	0.01 - 10	0.01	No Relaxation	
26	Mercury as Hg	μg/l	APHA 24 th Ed. 2023 - 3112 B	<0.5	0.5 - 1000	1.0	No Relaxation	
27	Nickel as Ni	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	<0.02	0.02 - 5.0	0.02	No Relaxation	
28	Arsenic as As	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	<0.02	0.02 - 2	0.01	0.05	
29	Total Chromium	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	<0.03	0.03 - 5.0	0.05	No Relaxation	
		· · ·	Microbiological Para	meters		1		
30	E. coli	MPN/ 100 ml	IS: 1622 - 1981 Reaffirmed: 2019	Absent	≥ 2 MPN Present or Absent per 100 ml	Shall not be detected in any 100 ml sample		
31	T. coli	MPN/ 100 ml	IS: 1622 - 1981 Reaffirmed: 2019	Absent	≥ 2 MPN Present or Absent per 100 ml		detected in any al sample	

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

Sr.	Test Parameter	Unit	nd water Quality Results at Protocol/Test Method	Result	Range of testing	Indian	Standard 00: 2012
No					/limit of detection	Desirable	Permissible
			Physico-chemical Para		1		1
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	pН	-	APHA 24 th Ed. 2023 - 4500 H ⁺	7.5	1 - 14	6.5-8.5	No Relaxation
4	Turbidity	NTU	APHA 24 th Ed. 2023 - 2130 B	<2.0	2 - 40	1	5
5	Total Dissolved Solids (TDS)	mg/l	IS: 3025 (Part-16): 2023	374.0	10 - 5000	500	2000
6	Ammonia (as total ammonia-N) mg/l APHA 24 th Ed. 2023 - 4500-NH ₃ F		<0.5	0.5 - 2.0	0.5	No Relaxation	
7	Anionic Detergents (as MBAS)	mg/l	APHA 24 th Ed. 2023 - 5540 C	<0.05	0.05 - 0.5	0.2	1.0
8	Calcium as Ca	mg/l	IS: 3025 (Part-40): 1991 Reaffirmed: 2019	49.6	2.0 - 600	75	200
9	Magnesium as Mg	mg/l	APHA 24th Ed. 2023 - 3500 Mg, B	22.35	0.1 - 200	30	100
10	Chloride as Cl	mg/l	APHA 24 th Ed. 2023 - 4500-CI ⁻ B	24.0	2.0 - 2000	250	1000
11	Fluoride as F	mg/l	APHA 24 th Ed. 2023 - 4500 F ⁻ C	0.19	0.02 - 5.0	1.0	1.5
11	Free Residual	IIIg/I	IS: 3025 (Part-26): 1986	0.19	0.02 - 3.0	1.0	1.5
12	Chlorine	mg/l	Reaffirmed: 2019	<0.1	0.1 - 5.0	0.2	1.0
13	Nitrate as NO ₃	mg/l	IS: 3025 (Part-34): 1986 Reaffirmed: 2019	<1.0	1.0 - 70	45	No Relaxation
14	(as C ₆ H ₅ OH)	Phenolic Compound (as C ₆ H ₅ OH) mg/l APHA 24 th Ed. 2023 - 5530 C		<0.001	0.001 - 0.005	0.001	0.002
15	Sulphate as SO ₄	mg/l	APHA 24 th Ed. 2023 - 4500- SO ₄ ² -	26.0	1.0 - 500	200	400
16	Alkalinity as CaCO ₃	mg/l	APHA 24th Ed. 2023 - 2320 B	236.0	2.0 - 1000	200	600
17	Total Hardness as CaCO ₃	mg/l	APHA 24 th Ed. 2023 - 2340 C	216.0	5.0 - 800	200	600
18	Aluminium as Al	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	<0.015	0.015 - 5.0	0.03	0.2
19	Boron as B	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	<0.05	0.05 - 2.0	0.5	1.0
20	Copper as Cu	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	<0.03	0.03 - 10	0.05	1.5
21	Iron as Fe	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	0.13	0.05 - 20	0.3	No Relaxation
22	Manganese as Mn	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	0.02	0.02 - 5.0	0.1	0.3
23	Zinc as Zn	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	0.24	0.05 - 15	5	15
24	Cadmium as Cd	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	<0.003	0.003 - 2.0	0.003	No Relaxation
25	Lead as Pb	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	<0.01	0.01 - 10	0.01	No Relaxation
26	Mercury as Hg	μg/l	APHA 24 th Ed. 2023 - 3112 B	<0.5	0.5 - 1000	1.0	No Relaxation
27	Nickel as Ni	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	<0.02	0.02 - 5.0	0.02	No Relaxation
28	Arsenic as As	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	<0.02	0.02 - 2	0.01	0.05
29	Total Chromium	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	<0.03	0.03 - 5.0	0.05	No Relaxation
Microbiological Parameters							
30	E. coli	MPN/ 100 ml	IS: 1622 - 1981 Reaffirmed: 2019	Absent	≥ 2 MPN Present or Absent per 100 ml	100 r	detected in any nl sample
31	T. coli	MPN/ 100 ml	IS: 1622 - 1981 Reaffirmed: 2019	Absent	≥ 2 MPN Present or Absent per 100 ml		detected in any nl sample

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

Sr.	Test Parameter	Unit	nd water Quality Results at 1	Result	Range of testing	Indian	Standard 00: 2012
No					/limit of detection	Desirable	Permissible
			Physico-chemical Para				
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	pН	-	APHA 24 th Ed. 2023 - 4500 H ⁺	7.4	1 - 14	6.5-8.5	No Relaxation
4	Turbidity	NTU	APHA 24 th Ed. 2023 - 2130 B	<2.0	2 - 40	1	5
5	Total Dissolved Solids (TDS)	mg/l	IS: 3025 (Part-16): 2023	385.6	10 - 5000	500	2000
6	Ammonia (as total ammonia-N)	` mo/l APHA /4" Pd /U/3 - 45UU-NH2 P		<0.5	0.5 - 2.0	0.5	No Relaxation
7	Anionic Detergents (as MBAS)	mg/l	APHA 24 th Ed. 2023 - 5540 C	<0.05	0.05 - 0.5	0.2	1.0
8	Calcium as Ca	mg/l	IS: 3025 (Part-40): 1991 Reaffirmed: 2019	52.8	2.0 - 600	75	200
9	Magnesium as Mg	mg/l	APHA 24th Ed. 2023 - 3500 Mg, B	21.38	0.1 - 200	30	100
10	Chloride as Cl	mg/l	APHA 24 th Ed. 2023 - 4500-CI ⁻ B	28.0	2.0 - 2000	250	1000
11	Fluoride as F	mg/l	APHA 24 th Ed. 2023 - 4500 F ⁻ C	0.22	0.02 - 5.0	1.0	1.5
11	Free Residual	IIIg/I	IS: 3025 (Part-26): 1986	0.22	0.02 - 3.0	1.0	1.5
12	Chlorine Chlorine	mg/l	Reaffirmed: 2019	<0.1	0.1 - 5.0	0.2	1.0
13	Nitrate as NO ₃	mg/l	IS: 3025 (Part-34): 1986 Reaffirmed: 2019	<1.0	1.0 - 70	45	No Relaxation
14	(as C ₆ H ₅ OH)	enolic Compound C ₆ H ₅ OH) mg/l APHA 24 th Ed. 2023 - 5530 C		<0.001	0.001 - 0.005	0.001	0.002
15	Sulphate as SO ₄	mg/l	APHA 24 th Ed. 2023 - 4500- SO ₄ ² -	24.0	1.0 - 500	200	400
16	Alkalinity as CaCO ₃	mg/l	APHA 24th Ed. 2023 - 2320 B	252.0	2.0 - 1000	200	600
17	Total Hardness as CaCO ₃	mg/l	APHA 24 th Ed. 2023 - 2340 C	220.0	5.0 - 800	200	600
18	Aluminium as Al	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	<0.015	0.015 - 5.0	0.03	0.2
19	Boron as B	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	<0.05	0.05 - 2.0	0.5	1.0
20	Copper as Cu	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	<0.03	0.03 - 10	0.05	1.5
21	Iron as Fe	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	0.17	0.05 - 20	0.3	No Relaxation
22	Manganese as Mn	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	0.03	0.02 - 5.0	0.1	0.3
23	Zinc as Zn	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	0.52	0.05 - 15	5	15
24	Cadmium as Cd	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	<0.003	0.003 - 2.0	0.003	No Relaxation
25	Lead as Pb	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	<0.01	0.01 - 10	0.01	No Relaxation
26	Mercury as Hg	μg/l	APHA 24 th Ed. 2023 - 3112 B	<0.5	0.5 - 1000	1.0	No Relaxation
27	Nickel as Ni	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	<0.02	0.02 - 5.0	0.02	No Relaxation
28	Arsenic as As	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	<0.02	0.02 - 2	0.01	0.05
29	Total Chromium	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	<0.03	0.03 - 5.0	0.05	No Relaxation
Microbiological Parameters							
30	E. coli	MPN/ 100 ml	IS: 1622 - 1981 Reaffirmed: 2019	Absent	≥ 2 MPN Present or Absent per 100 ml	100 n	detected in any nl sample
31	T. coli	MPN/ 100 ml	IS: 1622 - 1981 Reaffirmed: 2019	Absent	≥ 2 MPN Present or Absent per 100 ml		detected in any nl sample

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

		Grou	and water Quality Results at	Boreweii	water (March,	<i>2024)</i>	
Sr. No	Test Parameter	Unit	Protocol/Test Method	Result	Range of testing	1050	Standard 00: 2012
			DI 1 1 1 D		,	Desirable	Permissible
1	1 (C.1		Physico-chemical Para		5 - 30	_	1.5
1	Colour	Hazen	IS: 3025 (Part-04): 2021	<5.0		5	15
2	Odour	-	IS: 3025 (Part-05): 2018	Agreeable	Qualitative	Agreeable	Agreeable
3	pH	-	APHA 24 th Ed. 2023 - 4500 H ⁺	7.5	1 - 14	6.5-8.5	No Relaxation
4	Turbidity	NTU	APHA 24 th Ed. 2023 - 2130 B	<2.0	2 - 40	1	5
5	Total Dissolved Solids (TDS)	mg/l	z/l IS: 3025 (Part-16): 2023		10 - 5000	500	2000
6	Ammonia (as total ammonia-N)	nmonia-N) mg/1 APHA 24 th Ed. 2023 - 4500-NH ₃ F		<0.5	0.5 - 2.0	0.5	No Relaxation
7	Anionic Detergents (as MBAS)	mg/l	APHA 24 th Ed. 2023 - 5540 C	<0.05	0.05 - 0.5	0.2	1.0
8	Calcium as Ca	mg/l	IS: 3025 (Part-40): 1991 Reaffirmed: 2019	54.4	2.0 - 600	75	200
9	Magnesium as Mg	mg/l	APHA 24th Ed. 2023 - 3500 Mg, B	24.3	0.1 - 200	30	100
10	Chloride as Cl	mg/l	APHA 24 th Ed. 2023 - 4500-CI ⁻ B	24.0	2.0 - 2000	250	1000
11	Fluoride as F		APHA 24 th Ed. 2023 - 4500 F ⁻ C	0.25	0.02 - 5.0	1.0	1.5
11		mg/l		0.25	0.02 - 3.0	1.0	1.5
12	Free Residual Chlorine	mg/l	IS: 3025 (Part-26): 1986 Reaffirmed: 2019	<0.1	0.1 - 5.0	0.2	1.0
13	Nitrate as NO ₃	mg/l	IS: 3025 (Part-34): 1986 Reaffirmed: 2019	<1.0	1.0 - 70	45	No Relaxation
14	Phenolic Compound (as C ₆ H ₅ OH)	Phenolic Compound (as C ₆ H ₅ OH) mg/l APHA 24 th Ed. 2023 - 5530 C		<0.001	0.001 - 0.005	0.001	0.002
15	Sulphate as SO ₄	mg/l	APHA 24 th Ed. 2023 - 4500- SO ₄ ² -	20.0	1.0 - 500	200	400
16	Alkalinity as CaCO ₃	mg/l	APHA 24 th Ed. 2023 - 2320 B	260.0	2.0 - 1000	200	600
17	Total Hardness as CaCO ₃	mg/l	APHA 24 th Ed. 2023 - 2340 C	236.0	5.0 - 800	200	600
18	Aluminium as Al	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	<0.015	0.015 - 5.0	0.03	0.2
19	Boron as B	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	<0.05	0.05 - 2.0	0.5	1.0
20	Copper as Cu	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	<0.03	0.03 - 10	0.05	1.5
21	Iron as Fe	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	0.08	0.05 - 20	0.3	No Relaxation
22	Manganese as Mn	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	0.05	0.02 - 5.0	0.1	0.3
23	Zinc as Zn	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	0.66	0.05 - 15	5	15
24	Cadmium as Cd	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	<0.003	0.003 - 2.0	0.003	No Relaxation
25	Lead as Pb	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	<0.01	0.01 - 10	0.01	No Relaxation
26	Mercury as Hg	μg/l	APHA 24 th Ed. 2023 - 3112 B	<0.5	0.5 - 1000	1.0	No Relaxation
27	Nickel as Ni	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	<0.02	0.02 - 5.0	0.02	No Relaxation
28	Arsenic as As	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	<0.02	0.02 - 2	0.01	0.05
29	Total Chromium	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	<0.03	0.03 - 5.0	0.05	No Relaxation
			Microbiological Para	meters	1		
30	E. coli	MPN/ 100 ml	IS: 1622 - 1981 Reaffirmed: 2019	Absent	≥ 2 MPN Present or Absent per 100 ml		detected in any nl sample
31	T. coli	MPN/ 100 ml	IS: 1622 - 1981 Reaffirmed: 2019	Absent	≥ 2 MPN Present or Absent per 100 ml		detected in any nl sample

EC Compliance October, 2023 to March, 2024

3.5 SOIL MONITORING

3.5.1 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

Sr. No.	Location Code	Location name and description
1.	SQ - 01	Plant Premises

3.5.2 Methodology of Soil Monitoring

The sampling has been done in line with IS: 2720 & Methods of Soil Analysis, Part-1st, 2nd 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 20.03.2024.

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

3.5.3 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**.

EC Compliance October, 2023 to March, 2024

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

Sr. No.	Test Parameter	Unit	Protocol/Test Method	Result	Range of testing /limit of detection
1	рН	-	IS: 2720 (Part-26): 1987 Reaffirmed: 2021	7.4	1 - 14
2	Electrical Conductivity	μmhos/cm	IS: 14767: 2000 Reaffirmed: 2021	308.0	1.0 - 40000
3	Moisture content	%	IS: 2720 (Part -2): 1973 Reaffirmed: 2020	3.10	1.0 - 50
4	Nitrate as N	Kg/Hec	Method Manual of Soil Testing in Inda	218.6	5.0 -500
5	Phosphorus (as P ₂ O ₅)	Kg/Hec	Method Manual of Soil Testing in Inda	18.5	1-2000
6	Potash as K ₂ O	Kg/Hec	Method Manual of Soil Testing in Inda	139.0	1-2000
6	Copper	mg/kg	Method Manual of Soil Testing in Inda	0.38	0.3 - 500
7	Zinc as Zn	mg/kg	Method Manual of Soil Testing in Inda	9.42	1.0 - 500
8	Iron as Fe	mg/kg	Method Manual of Soil Testing in Inda	112.6	5.0 - 500
9	Manganese as Mn	mg/kg	Method Manual of Soil Testing in Inda	9.1	5.0 - 500
4	Sulphur	Kg/Hec	IS: 14685: 1999 Reaffirmed: 2019	14.0	5.0 - 100

3.5.4 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

Phone:0522-2720828,2720831, Fax:0522-2720764, Email: info@uppcb.in, Website: www.uppcb.com

191014/UPPCB/Moradabad(UPPCBRO)/CTO/both/SAMBHAL/2023

Date: 04/09/2023

To,

M/s

DHAMPUR BIO ORGANICS LIMITED unit Asmoli Division Sugar

Village - Asmoli and PO Asmoli Tehsil and District Sambhal U.P.,SAMBHAL,244251

Application Id-22377944

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 Asmoli Division Sugar** located at **Village - Asmoli and PO Asmoli Tehsil and District Sambhal U.P.,SAMBHAL,244251**. 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 Asmoli Division Sugar granted for the period from 17/08/2023 to 31/12/2024 and valid for manufacturing of following products.

S No	Product	Quantity	Unit
1	Sugar Cane Crushing	12500	Metric Tonnes/Day
2	Co-Generation Power Plant	41	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	48 KLD	STP	
Industrial	2500 KLD	ЕТР	

(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	рН	5.5-8.5
2	BOD (mg/l)	30 mg/l
3	COD (mg/l)	250 (mg/l)
4	Oil & Grease (mg/l)	10 (mg/l)
5	TSS (mg/l)	2100 (mg/l)

- (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
D 110.	1 at affecters	Standarus

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	170 TPH Boiler	Bagasse	1	Particulate Matter	72 meter from ground level
2	70 TPH Boiler & 50 TPH Boiler	Bagasse	1	Particulate Matter	60 meter common stack from ground level
3	750 KVA DG Set	Diesel	1	Sulphur Dioxide	16 meter from ground level

Emmission Quality Standards

S No.	Stack no	Parameters	Standards
1	3	Particulate Matter	As per applicable norms
2	1	Sulphur Dioxide	As per applicable norms

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		Night 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 Asmoli 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/Annum
2	Empty Containers/drum (Schedule I, Cat. 33.1)	Through TSDF	1.5 MT/Annum
3	Cotton Rags (Schedule I, Cat. 33.2)	Through TSDF	0.69 MT/Annum

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 results 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 noncompliance 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 Industial 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. This Consent to Operate Water is valid for production Sugar at cane crushing capacity of 12500 TCD and 41 MW co-generation power plant.
- 2.The discharge norms must conform to the norms prescribed in notification no G.S.R. 35 (E) dated 14.01.2016 of MoEF&CC.
- 3.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.
- 4.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.
- 5. Unit shall maintain pipe line from outlet of ETP and to the point of irrigation land.
- 6.Unit shall operate and maintain the APCS i.e. Wet Scrubber and common stack height of 60 meter from ground level at the boiler of 70 TPH and 50 TPH and Wet Scrubber and stack height of 72 meter from ground level at the boiler of 170 TPH.
- 7.01 DG sets of 750 KVA are equipped with canopy and stack height shall be 16 meter above from the ground level.
- 8.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.
- 9.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.
- 10.Unit shall ensure compliance of the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016.
- 11.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.
- 12. 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.

13.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.

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

15.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.

16.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.

17.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.

18.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.

19. This Consent order shall automatically become invalid on issuance of Closure Order by C.P.C.B $^{\prime}$ UPPCB and further on Revoking of Closure order, the Consent order shall become valid.

20.Unit shall comply all conditions of MoEF, New Delhi notification dated 14.01.2016.

CEO C-7.

Copy to:

Regional Officer, U.P. Pollution Control board, Moradabad.

CEO

C-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 रीसाइकलर को दें | प्राधिकृत ई-रीसाइक्लिंग 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 प्र्थाक्कीकरण 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 बिलियन kWh तक ऊर्जा की बचत हो सकती है
- परम्परागत बल्ब के स्थान पर CFL का उपयोग बिजली की खपत में प्रभावी कमी लाते हैं | उपयोग में न होने पर बिजली 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 | Pro-Active and Responsive Facilitation by Interactive,

Single-Window Hub

and Virtuous Environmental





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

To,

The -1

DHAMPUR BIO ORGANICS LIMITED

Sugar Mill Compound, Vill - Asmoli, Distt- Sambhal (UP) -244304

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/IND2/426671/2023 dated 20 Apr 2023. The particulars of the environmental clearance granted to the project are as below.

1. EC Identification No.

2. File No.

3. **Project Type**

4. Category

5. Project/Activity including Schedule No.

Name of Project 6.

EC23B025UP167115

7801-7491

Expansion

5(j) Sugar Industry

Proposed expansion of existing Sugar unit from 9000 TCD to 14000 TCD without Bio Organics Limited, (Unit: Asmoli,

Division: Sugar)

7. Name of Company/Organization

8. **Location of Project**

9. **TOR Date** DHAMPUR BIO ORGANICS LIMITED

UTTAR PRADESH

N/A

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

(e-signed) Member Secretary Date: 22/06/2023 **Member Secretary** SEIAA - (UTTAR PRAĎESH)

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.

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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, seiaaup@yahoo.com Phone no- 0522-2300541

Reference- MoEFCC Proposal no- SIA/UP/IND2/426671/2023 & SEIAA, U.P File no-7801-7491

Sub: Environmental Clearance for Proposed expansion of existing Sugar unit from 9000 TCD to 14000 TCD without change in existing co gen power capacity – 41 MW within existing industry premises at Village-Asmoli, Tehsil & District—Sambhal, U.P., M/s Dhampur Bio Organics Limited, (Unit: Asmoli, Division: Sugar).

Dear Sir,

This is with reference to your application / letter dated 20-04-2023, 17-05-2023 on above mentioned subject. The matter was considered by 753nd SEAC in meeting held on 19-05-2023 and 739th SEIAA meeting held on 09-06-2023.

A presentation was made by the project proponent along with their consultant M/s Environmental & Technical Research Centre to SEAC on 19-05-2023.

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 clearance is sought for expansion of existing Sugar unit from 9000 TCD to 14000 TCD without change in existing co gen power capacity 41 MW within existing industry premises at Village-Asmoli, Tehsil & District Sambhal, U.P., M/s Dhampur Bio Organics Limited, (Unit: Asmoli, Division: Sugar).
- 2. The terms of reference in the matter were issued through online Parivesh Portal on 28/12/2022.
- 3. The public hearing was organized on 08/04/2023 and final EIA report submitted through online Parivesh Portal on 20/04/2023.

4. Salient features of the project:

Sr	Particulars	Details			
No	CA				
Sr	Nature and Size of Project	Existing	Proposed expansion	After Expansion	
No.	Ü*		15		
1.	Sugar Cane Crushing Capacity	9000 TCD	5000TCD	14000 TCD	
2.	Co gen power Plant	41.0 MW	<u> </u>	41.0 MW	
				No Change	
3.	Area Details				
	Total Plant Area	Existing Industry: 34.5 Hectare			
		Proposed Expa	nsion: Nil		
		No change in t	he area of industry, exp	ansion will be done	
		within existing	premises.		
4.	Greenbelt / Plantation Area	11.385 Hectare	e (> 33% of total plot a	rea) will be used for	
		green belt dev	elopment.		
5.	Cost Details				
	Total Project Cost	Existing Cost - Rs 25955 Lakhs for expansion.			
		Cost for propos	sed Expansion - Rs 9800) Lakhs.	

		Total Cost after ex	xpansion - Rs 3575	5 Lakhs.		
	Cost for Environment	Capital Cost: Rs15				
	Management Plan	Recurring cost: Rs	225 Lakh /Annum			
Sr No	Particulars	Details				
6.	Environmental Setting Details (with	approximate aeria	al distance & direct	ion from plant site)		
	Nearest Village		1.30 km in South-W	· · · · · · · · · · · · · · · · · · ·		
		_	and – 1.60 km in So			
			r – 1.32 km in Sout			
			Gahra – 1.92 km ir			
		direction.				
	Nearest Town & City	Tehsil & District – Sambhal – 12.56 km in South direction.				
	Nearest National Highway / State	157 W (Sambhal- Joya Rd) – 1.23 Km in South-West				
	Highway	direction.				
		Asmoli Madhan F	Rd - 0.01 Km in We	st direction.		
	108	NH-9 (Ghaziabad	-Moradabad-Ramp	our) – 12.89 Km in		
		North direction.				
			<mark>Hasanpu</mark> r Rd) – 10.	47 Km in South-West		
		direction.				
				i Rd) – 11.82 Km in		
		South-East direction. Sirsi Mukhdampur Railway Station – 12.48 km in South-				
	Nearest Railway station		ur Railway Station -	- 12.48 km in South-		
		East direction. Sambhal Hatim Sarai- Railway Station – 12.54 km in South				
			arai- Railway Statio	on – 12.54 km in South		
	No see t Aires est	direction.	445 57 km in Mark	balina aki a n		
	Nearest Airport		115.57 km in West	- 14 <mark>5</mark> .55 km in West		
		direction.	emational Amport	- 143.33 KIII III West		
	National Parks, Reserved Forests		Wild Life Sanctua	ry, Biosphere Reserve,		
	(RF)/ Protected Forests (PF),			e Corridors Protected		
	Wildlife Sanctuaries, Biosphere			adius of the plant site.		
	Reserves, Tiger/ Elephant					
	Reserves, Wildlife Corridors etc.					
	within 10 km radius					
8.	Basic Requirements for the project		01			
	Water Requirement	Existing	Proposed	After Proposed		
	"OF		expansion	expansion		
	Industrial (Fresh Water)	900 KLD	480 KLD	1380 KLD		
		(0.09 KL/T of		(@ 0.10 KL/T of cane		
		cane crush)		crush)		
	Domestic (Fresh Water)	500 KLD	200 KLD	700 KLD		
	Total Fresh Water requirement	1400 KLD	680 KLD	2080 KLD		
	Source of Fresh Water	Ground water through existing Tube / Bore well.				
	Power Requirement	Existing power requirement – 11.0 MW,				
		After proposed expansion: 17.0 MW,				
		Power requirement after expansion will be met from in-				
		house co-gen power plant. Surplus power will be supplied				
		to grid.				
	Man Power Requirement	Nil tor propose	ed expansion, exi	isting employees are		

		capable of running the complete plant after expansion					
		also.	also.				
		Indirect employme	nt: 100 no will be	expected to increase			
		after expansion.					
9.	Steam requirement	Existing: 165 TPH,					
		After proposed exp	ansion: 282 TPH				
10.	Product Details	Existing After Proposed Expansion					
а	Sugar	990 MT/Day 1540 MT/Day					
b	Molasses (By product)	405 MT/Day 630 MT/Day					
С	Bagasse (By product)	2520 MT/Day	3920 MT	/Day			
d	Press Mud (By Product)	405 MT/Day	630 MT/I	Day			
е	Co gen Power	41.0 MW					
11.	Fuel and its Quantity	Bagasse is being an	d will be used as fo	uel.			
	40-	Existing requiremen	nt: 3163 TPD,				
	100	After proposed exp	ansion: same as po	er existing			
13.	Raw Material						
		Existing	Proposed	After proposed			
			expansion	expansion			
	Sugar Cane Crushing	9000 TCD	5000 TCD	14000 TCD			

5. Land use details;

Sr. No.	Land Use	Area in Sqm	Area in Percentage
1	Roof Top (Building, Covered Shed)	17077.5	4.95 %
2	Green Belt	113850	33.0 %
3	Road and Paved	16111.5	4.67 %
4	Open Area	197961.0	57.38 %
Grand Total		345000	100 %

6. Product details:

Product and its Quantity	Existing	After Expansion	
	Sugar Cane 9000 TCD Crushing	Sugar Cane 14000 TCD	
		Crushing	
Sugar (Product)	990 MT/Day	1540 MT/Day	
Molasses (By Product)	405 MT/Day	630 MT/Day	
Bagasse (By Product)	2520 MT/Day	3920 MT/Day	
Press Mud (By Product)	405 MT/Day	630 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	9000 T	5000 T	14000 T	From reserve area by tractor trolley/trucks
2. Che	micals				
a.	Lime	18.0 T	10.0 T	28.0 T	Will be sourced from Lime Stone mines and transported by trucks
b.	Caustic Soda	0.45 T	0.25 T	0.70 T	Will be purchased from Caustic Soda Manufacturers and will be transported by trucks
C.	Common salt	1.8 T	1.0 T	2.8 T	Will be sourced from Open Market.

8. Water requirement details;

Particular	Existing capacity	Proposed	After proposed expansion
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			expansion			
Total	Water	Industrial: 820 KLD	Industrial: 80 KLD	Industrial : 900 KLD		
Requirement		(@ 0.16 KL/T of cane	Domestic : 10.0	(@ 0.16 KL/T of cane crush)		
		crush)	KLD	Domestic: 80.0 KLD		
		Domestic : 70.0 KLD				
Total		890 KLD	90 KLD	980 KLD		
Source of Wat	er	Ground water through T	ube / Bore well. In	dustry applied for renewal of		
		NOC in GWD department.				
Waste	Water	1800 KLD	1000 KLD	Total after proposed		
Generation				expansion: 2800 KLD		
Waste	water	Existing treatment Strate	gy: Effluent is being	treated through Activated		
treatment		sludge process. ETP comp	rises of Bar Screen,	Oil & Grease trap, chemical		
		Mixing, Equalization, Prim	nary Clarifier, Anaero	bic Digester, Aeration,		
		Secondary Clarifier, MGF, ACF and Decanter.				
		Treatment Strategy after expansion: Effluent will be treated through same				
		treatment strategy, Capacity of ETP – 3000 KLD found adequate for effluent				
		treatment.		LOY		

9. Solid waste details;

y. Sond Waste details,					
Category	Type of Waste	Colour of Bins	Disposal Method	Total V	Vaste
				(Kg/day)	
Bio Degradable	Organic Waste	Green	Organic waste	150.0	
		4/5	converter within the		
			project site		
Non-Biodegradable	Recyclable Waste	White	Authorized Recycler	60.0	
Non-Biodegrada <mark>b</mark> le	Iner <mark>t Wa</mark> ste	Black	Nearby Landfill Site	40.0	
	Total			250 Kg/day	у

10. Process waste:

Solid waste	Existing Capacity	Proposed Expansion	Method of disposal
Boiler ash	56.93 MT/Day	No Change	Boiler ash will be supplied to the brick
4			manufacturer.
ETP Sludge	8.0 MT/Day	12.0 MT/Day	ETP Sludge will be given to the
			farmers.
Press Mud	405 MT/Day	630 MT/Day	Press mud will be given to the farmers
Oil & Grease	1500 kg/day	No Change	Will be provided to Authorised UPPCB
from ETP			vendor for further disposal. Hazardous
	120		authorisation from UPPCB will be
	Už	200 0 M	obtained.

^{11.} 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 19-05-2023 the State Level Environment Impact Assessment Authority (SEIAA) in its Meeting held 09-06-2023 and recommended 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. Discharge should be as per MoEF&CC Guidelines.
- II. PP shall install CAAQMS.

- III. Disposal of fly ash shall be done within the premises.
- IV. Three tier green belt shall be developed with native species all along the periphery of the project. Site survival rate of green belt developed shall be monitored on periodic basis to ensure that damaged plants are replaced with new plants in the subsequent years (Miyawaki method to be adopted for plantation)
- v. Performance test shall be conducted on all pollution control system every year and report shall be submitted to Regional office of the MoEF and CC.
- VI. Greening and paving shall be implemented in the plant area to arrest soil erosion and dust pollution exposed soil surface.
- VII. Properly covered vehicles shall be used while transporting material and product.
- VIII. Allergy test should also be included in health checkup of works.
- IX. 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.

Standard environmental clearance conditions:

- *I.* Statutory compliance:
 - The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1986, in case of the diversion of forest land for nonforest 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:
 - 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.s 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 12 0° each), covering upwind and downwind direct ions.
- 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

- 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. 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.
- III. 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.
- IV. 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.
- v. Generated effluent shall be treated in ETP and treated effluent shall conform the standard under the EP Act, 1986/CPCB/MoEFCC and treated water from ETP shall be used for irrigation.
- VI. 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

- 1. 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

v. Energy Conservation measures

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

VI. Waste management

- 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

 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 I 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 sixmonthly 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

- 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_{10} , SO_2 , NO_x (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 Minis try,

- 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 Sambhal. 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 nodevelopment 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)
- 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)
- 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)
- 4. District Magistrate, Sambhal.
- 5. Member Secretary, Uttar Pradesh Pollution Control Board, TC-12V, Paryavaran Bhawan, Vibhuti Khand, Gomti Nagar, Lucknow-226010 (email ms@uppcb.com)
- 6. Copy to Web Master for uploading on PARIVESH Portal.
- 7. Copy for Guard File.





Office & Laboratory: 2/261, Vishwas Khand, Gomti Nagar, Lucknow - 226 010 (U.P.)

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

(ISO 9001:2015, ISO 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/42

TEST REPORT AMBIENT AIR QUALITY MONITORING REPORT

Test Re	port Ref No. ETRC/EPA/10456/2024	Date of Report: 22.02.2024			
Name /	Address/Type of Industry	M/s Dhampur Bio-organics Limited Unit: Asmoli, Division Sugar Village: Asmoli Tehsil: & District: Sambhal (U.P.) - 244304			
Monitore	ed by	ETRC, Lucknow			
Location	of Sampling points	Residential Colony (A -	Block)		
Sr. No.	GENERAL OBSERVATIONS	DETAILS-PM ₁₀	DETAILS-PM _{2.5}		
1 (a)	Weather conditions	Clear	Clear		
(b)	Wind direction	West to East	West to East		
(c)	Average humidity (%)	54	54		
(d)	Average ambient temperature (°C)	21	21		
(e)	Time of Sampling Started (Hours)	10:29 am (15.02.2024)	10:29 am (15.02.2024)		
(f)	Time of Sampling completed (Hours)	10:19 am (16.02.2024)	10:19 am (16.02.2024)		
(g)	Total time of sampling (minutes)	24 hour (1423 minutes)	24 hour (1423 minutes)		
2	Average sampling rate for PM (m³/minute)	1.155	NA		
3	Average sampling rate for gas (LPM)	0.5	NA		
4	TOTAL VOLUME OF AIR SAMPLED				
	• PM (m³)	• 1643.103	• 23.708		
	GAS (liter)	• 711.3			

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 ₁₀)	IS: 5182 (Part - 23): 2006, RA: 2022	μg/m³	77.5	For 24 hour = 100
2	Particulate matters size less than 2.5 µm (PM _{2.5})	IS: 5182 (Part - 24): 2019	μg/m³	49.77	For 24 hour = 60
3	Sulphur Dioxide (SO ₂)	IS: 5182 (Part - 2): 2001, RA: 2022	µg/m³	13.58	For 24 hour = 80
4	Oxides of Nitrogen (NO _X)	IS: 5182 (Part - 6): 2006, RA: 2022	µg/m³	19.20	For 24 hour = 80
5	Carbon Monoxide (CO)	IS: 5182 (Part - 10): 1999, RA: 2019	mg/m ³	0.51	For 08 hour = 02
6	Ozone (O ₃)	IS: 5182 (Part - 9): 1974, RA: 2019	µg/m ³	BDL	For 08 hour = 100
7	Ammonia (NH ₃)	IS: 5182 (Part - 25): 2018	μg/m ³	20.05	For 24 hour = 400
8	Lead (Pb)	IS: 5182 (Part - 22): 2004, RA: 2019	µg/m³	BDL	For 24 hour = 01
9	Benzene (C ₆ H ₆)	IS: 5182 (Part - 11): 2006, RA: 2022	µg/m³	BDL	Annual = 05
10	Nickel (Ni)	IS: 5182 (Part - 26): 2020	ng/m ³	BDL	Annual = 20
11	Arsenic (As)	EPA/625/R-96/010a; US EPA IO 3.2	ng/m ³	BDL	Annual = 06
12	Benzo (a) Pyrine - particulate phase only	IS: 5182 (Part - 12): 2004, RA: 2019	ng/m³	BDL	Annual = 01

BDL=Below Detection Limit

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

- ETRC warrants that all analytical work is conducted professionally in accordance with all applicable standard laboratory practices and that this data reflects our best attempt to generate accurate results for the sample, mentioned in the report as above.
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Authorized Signatory (Sandeep Kr Verma) Lab-Incharge CHECKED OF SERVICES

Authorized Signatory
(Ritu Garg)



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ETRC/PM09/TEST-REP/FT/42

TEST REPORT AMBIENT AIR QUALITY MONITORING REPORT

Test Report Ref No. ETRC/EPA/10457/2024 Date of Report: 22.02.2024			.2024	
	Address/Type of Industry	M/s Dhampur Bio-organics Limited Unit: Asmoli, Division Sugar		
		Village: Asmoli		
		Tehsil: & District: Sar	nbhal (U.P.) - 244304	
Monitore		ETRC, Lucknow		
Location	of Sampling points	Boiling House Near Dryer House		
Sr. No.	GENERAL OBSERVATIONS	DETAILS-PM ₁₀	DETAILS-PM _{2.5}	
1 (a)	Weather conditions	Clear	Clear	
(b)	Wind direction	West to East	West to East	
(c)	Average humidity (%)	54	54	
(d)	Average ambient temperature (°C)	21	21	
(e)	Time of Sampling Started (Hours)	10:42 am (15.02.2024)	10:42 am (15.02.2024)	
(f)	Time of Sampling completed (Hours)	10:30 am (16.02.2024)	10:30 am (16.02.2024)	
(g)	Total time of sampling (minutes)	24 hour (1414 minutes)	24 hour (1414 minutes)	
2	Average sampling rate for PM (m³/minute)	1.165	NA	
3	Average sampling rate for gas (LPM)	0.5	NA	
4	TOTAL VOLUME OF AIR SAMPLED			
	• PM (m³)	• 1646.844	• 23.559	
	GAS (liter)	• 706.8		

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 ₁₀)	IS: 5182 (Part - 23): 2006, RA: 2022	μg/m ³	82.4	For 24 hour = 100
2	Particulate matters size less than 2.5 µm (PM _{2.5})	IS: 5182 (Part - 24): 2019	μg/m³	50.51	For 24 hour = 60
3	Sulphur Dioxide (SO ₂)	IS: 5182 (Part - 2): 2001, RA: 2022	µg/m ³	14.64	For 24 hour = 80
4	Oxides of Nitrogen (NO _X)	IS: 5182 (Part - 6): 2006, RA: 2022	µg/m³	20.10	For 24 hour = 80
5	Carbon Monoxide (CO)	IS: 5182 (Part - 10): 1999, RA: 2019	mg/m ³	0.50	For 08 hour = 02
6	Ozone (O ₃)	IS: 5182 (Part - 9): 1974, RA: 2019	µg/m³	BDL	For 08 hour = 100
7	Ammonia (NH ₃)	IS: 5182 (Part - 25): 2018	µg/m³	21.06	For 24 hour = 400
8	Lead (Pb)	IS: 5182 (Part - 22): 2004, RA: 2019	µg/m³	BDL	For 24 hour = 01
9	Benzene (C ₆ H ₆)	IS: 5182 (Part - 11): 2006, RA: 2022	µg/m³	BDL	Annual = 05
10	Nickel (Ni)	IS: 5182 (Part - 26): 2020	ng/m ³	BDL	Annual = 20
11	Arsenic (As)	EPA/625/R-96/010a; US EPA IO 3.2	ng/m ³	BDL	Annual = 06
12	Benzo (a) Pyrine - particulate phase only	IS: 5182 (Part - 12): 2004, RA: 2019	ng/m ³	BDL	Annual = 01

BDL=Below Detection Limit

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Authorized Signatory
(Ritu Garg)

QM



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ETRC/PM09/TEST-REP/FT/42

TEST REPORT AMBIENT AIR QUALITY MONITORING REPORT

Test Re	port Ref No. ETRC/EPA/10458/2024	Date of Report: 22.02.2024			
Name /Address/Type of Industry Monitored by		M/s Dhampur Bio-organics Limited Unit: Asmoli, Division Sugar Village: Asmoli Tehsil: & District: Sambhal (U.P.) - 244304			
		ETRC, Lucknow	(0.1.1) 21.1001		
Location	of Sampling points	Co-Gen Area Near D.M. Plant			
Sr. No.	GENERAL OBSERVATIONS	DETAILS-PM ₁₀	DETAILS-PM _{2.5}		
1 (a)	Weather conditions	Clear	Clear		
(b)	Wind direction	West to East	West to East		
(c)	Average humidity (%)	55	55		
(d)	Average ambient temperature (°C)	20	20		
(e)	Time of Sampling Started (Hours)	10:34 am (16.02.2024)	10:34 am (16.02.2024)		
(f)	Time of Sampling completed (Hours)	10:20 am (17.02.2024)	10:20 am (17.02.2024)		
(g)	Total time of sampling (minutes)	24 hour (1415 minutes)	24 hour (1415 minutes)		
2	Average sampling rate for PM (m³/minute)	1.145	NA		
3	Average sampling rate for gas (LPM)	0.5	NA		
4	TOTAL VOLUME OF AIR SAMPLED				
	• PM (m³)	• 1620.633	• 23.589		
	GAS (liter)	• 707.7			

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 ₁₀)	IS: 5182 (Part - 23): 2006, RA: 2022	µg/m³	82.5	For 24 hour = 100
2	Particulate matters size less than 2.5 µm (PM _{2.5})	IS: 5182 (Part - 24): 2019	µg/m³	50.45	For 24 hour = 60
3	Sulphur Dioxide (SO ₂)	IS: 5182 (Part - 2): 2001, RA: 2022	µg/m³	14.12	For 24 hour = 80
4	Oxides of Nitrogen (NO _X)	IS: 5182 (Part - 6): 2006, RA: 2022	µg/m³	20.24	For 24 hour = 80
5	Carbon Monoxide (CO)	IS: 5182 (Part - 10): 1999, RA: 2019	mg/m ³	0.50	For 08 hour = 02
6	Ozone (O ₃)	IS: 5182 (Part - 9): 1974, RA: 2019	µg/m³	BDL	For 08 hour = 100
7	Ammonia (NH ₃)	IS: 5182 (Part - 25): 2018	µg/m³	21.10	For 24 hour = 400
8	Lead (Pb)	IS: 5182 (Part - 22): 2004, RA: 2019	µg/m³	BDL	For 24 hour = 01
9	Benzene (C ₆ H ₆)	IS: 5182 (Part - 11): 2006, RA: 2022	µg/m ³	BDL	Annual = 05
10	Nickel (Ni)	IS: 5182 (Part - 26): 2020	ng/m ³	BDL	Annual = 20
11	Arsenic (As)	EPA/625/R-96/010a; US EPA IO 3.2	ng/m ³	BDL	Annual = 06
12	Benzo (a) Pyrine - particulate phase only	IS: 5182 (Part - 12): 2004, RA: 2019	ng/m³	BDL	Annual = 01

BDL=Below Detection Limit

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Authorized Signatory (Ritu Garg)



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ETRC/PM09/TEST-REP/FT/42

TEST REPORT AMBIENT AIR QUALITY MONITORING REPORT

Test Re	port Ref No. ETRC/EPA/10459/2024	Date of Report: 22.02	.2024		
Name /Address/Type of Industry		M/s Dhampur Bio-organics Limited Unit: Asmoli, Division Sugar Village: Asmoli Tehsil: & District: Sambhal (U.P.) - 244304			
Monitor	ed by	ETRC, Lucknow			
Location	of Sampling points	ETP Area			
Sr. No.	GENERAL OBSERVATIONS	DETAILS-PM ₁₀	DETAILS-PM _{2.5}		
1 (a)	Weather conditions	Clear	Clear		
(b)	Wind direction	West to East	West to East		
(c)	Average humidity (%)	55	55		
(d)	Average ambient temperature (°C)	20	20		
(e)	Time of Sampling Started (Hours)	10:52 am (16.02.2024)	10:52 am (16.02.2024)		
(f)	Time of Sampling completed (Hours)	10:40 am (17.02.2024)	10:40 am (17.02.2024)		
(g)	Total time of sampling (minutes)	24 hour (1406 minutes)	24 hour (1406 minutes)		
2	Average sampling rate for PM (m³/minute)	1.180	NA		
3	Average sampling rate for gas (LPM)	0.5	NA		
4	TOTAL VOLUME OF AIR SAMPLED				
	• PM (m ³)	• 1659.552	• 23.439		
	GAS (liter)	• 703.2			

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 ₁₀)	IS: 5182 (Part - 23): 2006, RA: 2022	μg/m³	79.4	For 24 hour = 100
2	Particulate matters size less than 2.5 µm (PM _{2.5})	IS: 5182 (Part - 24): 2019	µg/m³	47.78	For 24 hour = 60
3	Sulphur Dioxide (SO ₂)	IS: 5182 (Part - 2): 2001, RA: 2022	µg/m³	13.91	For 24 hour = 80
4	Oxides of Nitrogen (NO _X)	IS: 5182 (Part - 6): 2006, RA: 2022	µg/m³	19.85	For 24 hour = 80
5	Carbon Monoxide (CO)	IS: 5182 (Part - 10): 1999, RA: 2019	mg/m ³	0.50	For 08 hour = 02
6	Ozone (O ₃)	IS: 5182 (Part - 9): 1974, RA: 2019	µg/m³	BDL	For 08 hour = 100
7	Ammonia (NH ₃)	IS: 5182 (Part - 25): 2018	µg/m³	21.18	For 24 hour = 400
8	Lead (Pb)	IS: 5182 (Part - 22): 2004, RA: 2019	µg/m ³	BDL	For 24 hour = 01
9	Benzene (C ₆ H ₆)	IS: 5182 (Part - 11): 2006, RA: 2022	µg/m³	BDL	Annual = 05
10	Nickel (Ni)	IS: 5182 (Part - 26): 2020	ng/m ³	BDL	Annual = 20
11	Arsenic (As)	EPA/625/R-96/010a; US EPA IO 3.2	ng/m ³	BDL	Annual = 06
12	Benzo (a) Pyrine - particulate phase only	IS: 5182 (Part - 12): 2004, RA: 2019	ng/m³	BDL	Annual = 01

BDL=Below Detection Limit

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ومهيد تبلاج **Authorized Signatory** (Ritu Garg) QM



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ETRC/PM09/TEST-REP/FT/43

TEST REPORT STACK EMISSION MONITORING AND ANALYSIS REPORT STACK No. 01

Test Re	port Ref No. ETRC/EPA/10460/2024	Date of Report: 22.02.2024
Name //	Address/Type of Industry	M/s Dhampur Bio-organics Limited
		Unit: Asmoli, Division Sugar
		Village: Asmoli
		Tehsil: & District: Sambhal (U.P.) - 244304
Monitore	ed by	ETRC, Lucknow
Sr. No.	GENERAL INFORMATION	DETAILS
1.(a)	Date of monitoring	16.02.2024
(b)	Stack material	RCC
(c)	Height of stack from ground level	72 mts
(d)	Source to which stack attached	Boiler
(e)	No. of boiler attached with capacity	01 No., 170 TPH
(f)	Type and quantity of fuel used	Bagasse
(g)	Details of APCS installed	ESP
2.	PARAMETERS	VALUES
(a)	Ambient temperature (°C)	24.0
(b)	Stack gas temperature (°C)	139.0
(c)	Stack gas velocity (m/sec)	11.90
(d)	Flow rate (LPM)	17
(e)	Sampling time (minutes)	60
(f)	Volume of air sampled (liters)	1020

TEST RESULT

Sr. No.	Parameter	Unit	Protocol	Result	Range of Testing / Limit of Detection	Standard (as per CPCB)
1	Particulate Matter	mg/Nm ³	IS: 11255 (Part-1): 1985 Reaffirmed: 2019	80.5	2.0 - 1000	150
2	Sulphur Dioxide (SO ₂)	mg/Nm ³	IS:11255 (Part-2): 1985 Reaffirmed: 2019	4.9	1.0 - 2000	-
3	Oxide of Nitrogen (NO _x)	mg/Nm ³	IS:11255 (Part-7): 2005 Reaffirmed: 2022	28.0	2.0 - 1000	-

BDL = Below Detection Limit

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

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ETRC/PM09/TEST-REP/FT/43

TEST REPORT STACK EMISSION MONITORING AND ANALYSIS REPORT STACK No. 02

Test Re	port Ref No. ETRC/EPA/10461/2024	Date of Report: 22.02.2024	
Name //	Address/Type of Industry	M/s Dhampur Bio-organics Limited Unit: Asmoli, Division Sugar	
		Village: Asmoli	
		Tehsil: & District: Sambhal (U.P.) - 244304	
Monitored by		ETRC, Lucknow	
Sr. No.	GENERAL INFORMATION	DETAILS	
1.(a)	Date of monitoring	16.02.2024	
(b)	Stack material	RCC	
(c)	Height of stack from ground level	60 mts	
(d)	Source to which stack attached	Boiler	
(e)	No. of boiler attached with capacity	01 No., 70 TPH	
(f)	Type and quantity of fuel used	Bagasse	
(g)	Details of APCS installed	Wet Scrubber	
2.	PARAMETERS	VALUES	
(a)	Ambient temperature (°C)	24.0	
(b)	Stack gas temperature (°C)	139.0	
(c)	Stack gas velocity (m/sec)	11.86	
(d)	Flow rate (LPM)	17	
(e)	Sampling time (minutes)	62	
(f)	Volume of air sampled (liters)	1054	

TEST RESULT

Sr. No.	Parameter	Unit	Protocol	Result	Range of Testing / Limit of Detection	Standard (as per CPCB)
1	Particulate Matter	mg/Nm ³	IS: 11255 (Part-1): 1985 Reaffirmed: 2019	79.6	2.0 - 1000	150
2	Sulphur Dioxide (SO ₂)	mg/Nm ³	IS:11255 (Part-2): 1985 Reaffirmed: 2019	4.8	1.0 - 2000	-
3	Oxide of Nitrogen (NO _x)	mg/Nm ³	IS:11255 (Part-7): 2005 Reaffirmed: 2022	24.0	2.0 - 1000	-

BDL = Below Detection Limit

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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/EPA/10463/2024		Date of Report: 22.02.2024
Name /Address/Type of Industry		M/s Dhampur Bio-organics Limited Unit: Asmoli, Division Sugar
		Village: Asmoli
		Tehsil: & District: Sambhal (U.P.) - 244304
Monitored by		ETRC, Lucknow
Sr. No.	GENERAL INFORMATION	DETAILS
(a)	Date of Monitoring	15/02/2024 (06:00 AM) to 17/02/2024 (06:00 AM)
(b)	Sample Description	Ambient Noise
(c)	Parameter	Equivalent sound level
(d)	Environmental Condition	Normal
(e)	Monitoring Protocol	IS: 9989: 1981, Reaffirmed: 2020

TEST RESULT

Ambient Noise Level					
Sr. No.	Locations	Unit	Results DAY TIME (06:00 AM - 10:00 PM)	Results NIGHT TIME (10:00 PM - 06:00 AM)	
1	Near 70 TPH Area	dB(A)	65.2	56.8	
2	Near 170 TPH area	dB(A)	65.1	57.2	
3	30 MW Turbine Floor	dB(A)	70.5	67.3	

	Noise Standards as per CPC	B Schedule rule 3(1) and 4(1)	
Area	Catagon; of Asso/Zono	Limits in dB(A) Leg		
Code	Category of Area/Zone	Day Time	Night Time	
Α	Industrial Area	75	70	
В	Commercial Area	65	55	
С	Residential Area	55	45	
D	Silence Zone	50	40	

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ETRC/PM09/TEST-REP/FT/46

TEST REPORT SOIL ANALYSIS

Test Report Ref No. ETRC/EPA/10736/2024	Date of Report: 27.03.2024
Name /Address/Type of Industry	M/s Dhampur Bio-organics Limited Unit: Asmoli, Division Sugar Village: Asmoli Tehsil: & District: Sambhal (U.P.) - 244304

SAMPLE DETAILS

1	Sampling Location	Plant Premises	5	Packing Condition	Sealed
2	Sample Description	Soil	6	Sample Collected By	Industry self
3	Sample received date	20.03.2024	7	Analysis Start Date	20.03.2024
4	Sample Quantity	1.0 Kg	8	Analysis End Date	27.03.2024

TEST RESULT

Sr. No.	Test Parameter	Unit	Protocol/Test Method	Result	Range of testing / Limit of detection
1	рН	-	IS: 2720 (Part-26):1987 Reaffirmed:2021	7.4	1 - 14
2	Electrical Conductivity	μS/cm	IS: 14767:2000 Reaffirmed:2021	308.0	1 - 40000
3	Moisture Contents	%	IS: 2720 (Part -2):1973 Reaffirmed:2020	3.10	1.0 - 50
4	Nitrate as N	kg/Hec	Method Manual of Soil Testing in Inda	218.6	5.0 - 500
5	Phosphorus (as P ₂ O ₅)	kg/Hec	Method Manual of Soil Testing in Inda	18.5	1 - 2000
6	Potash as K ₂ O	kg/Hec	Method Manual of Soil Testing in Inda	139.0	1.0 - 2000
7	Copper as Cu	mg/kg	Method Manual of Soil Testing in Inda	0.38	0.3 - 500
8	Zinc as Zn	mg/kg	Method Manual of Soil Testing in Inda	9.42	1.0 - 500
9	Iron as Fe	mg/kg	Method Manual of Soil Testing in Inda	112.6	5.0 - 500
10	Manganese as Mn	mg/kg	Method Manual of Soil Testing in Inda	9.1	5.0 - 500
11	Sulphur	mg/kg	IS: 14685:1999 Reaffirmed:2019	14.0	5.0 - 100

Method Manual of Soil Testing in India (Department of Agriculture and Corporation Ministry of Agriculture, Government of India), 4.6.3 (16b): 2022
...... END OF REPORT.......

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ETRC/PM09/TEST-REP/FT/45

TEST REPORT WATER & WASTE WATER ANALYSIS

Test Report Ref No. ETRC/1210/12646/2023	Date of Report: 12.10.2023
Name /Address/Type of Industry	M/s Dhampur Bio-organics Limited
	Unit: Asmoli, Division Sugar
	Village: Asmoli
	Tehsil: & District: Sambhal (U.P.) - 244304

SAMPLE DETAILS

1	Water/ Waste Water	Ground Water	5	Packing Condition	Sealed
2	Sample Description	Borewell Water	6	Sample Collected By	ETRC
3	Sample received date	05.10.2023	7	Analysis Start Date	05.10.2023
4	Sample Quantity	5.0 liters	8	Analysis End Date	11.10.2023

TEST RESULT

Sr.	Test Parameter	Unit	Protocol/Test Method	Result	Range of testing	Indian Standard 10500: 2012	
No	rest raidifietei	Ome			/limit of detection	Desirable	Permissible
			Physico-chemical Para				
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 th Ed. 2023 - 4500 H ⁺	7.6	1 - 14	6.5-8.5	No Relaxation
4	Turbidity	NTU	APHA 24 th Ed. 2023 - 2130 B	BDL	2 - 40	1	5
5	Total Dissolved Solids (TDS)	mg/l	IS: 3025 (Part-16): 2023	356.8	10 - 5000	500	2000
6	Ammonia (as total ammonia-N)	mg/l	APHA 24 th Ed. 2023 - 4500-NH ₃ F	BDL	0.5 - 2.0	0.5	No Relaxation
7	Anionic Detergents (as MBAS)	mg/l	APHA 24 th 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 th Ed. 2023 - 3500 Mg, B	23.32	0.1 - 200	30	100
10	Chloride as Cl	mg/l	APHA 24 th Ed. 2023 - 4500-Cl ⁻ B	24.0	2.0 - 2000	250	1000
11	Fluoride as F	mg/l	APHA 24 th Ed. 2023 - 4500 F ⁻ C	0.36	0.02 - 5.0	1.0	1.5
12	Free Residual Chlorine	mg/l	IS: 3025 (Part-26): 1986 Reaffirmed: 2019	BDL	0.1 - 5.0	0.2	1.0
13	Nitrate as NO₃	mg/l	IS: 3025 (Part-34): 1986 Reaffirmed: 2019	BDL	1.0 - 70	45	No Relaxation
14	Phenolic Compound (as C ₆ H ₅ OH)	mg/l	APHA 24 th Ed. 2023 - 5530 C	BDL	0.001 - 0.005	0.001	0.002
15	Sulphate as SO ₄	mg/l	APHA 24 th Ed. 2023 - 4500- SO ₄ ²⁻	24.0	1.0 - 500	200	400
16	Alkalinity as CaCO ₃	mg/l	APHA 24 th Ed. 2023 - 2320 B	264.0	2.0 - 1000	200	600
17	Total Hardness as CaCO ₃	mg/l	APHA 24 th Ed. 2023 - 2340 C	228.0	5.0 - 800	200	600
18	Aluminium as Al	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.015 - 5.0	0.03	0.2
19	Boron as B	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.05 - 2.0	0.5	1.0
20	Copper as Cu	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.03 - 10	0.05	1.5
21	Iron as Fe	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	0.06	0.05 - 20	0.3	No Relaxation
22	Manganese as Mn	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	0.02	0.02 - 5.0	0.1	0.3

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Test Report Ref No. ETRC/1210/12646/2023

31	T. coli	MPN/ 100 ml	IS: 1622 - 1981 Reaffirmed: 2019	Absent	1.8 - 1600		e detected in any ml sample
30	E. coli	MPN/ 100 ml	IS: 1622 - 1981 Reaffirmed: 2019	Absent	1.8 - 1600	100	e detected in any ml sample
		l samsu.	Microbiological Param	eters			
29	Total Chromium	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.03 - 5.0	0.05	No Relaxation
28	Arsenic as As	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.02 - 2.0	0.01	0.05
27	Nickel as Ni	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.02 - 5.0	0.02	No Relaxation
26	Mercury as Hg	μg/l	APHA 24 th Ed. 2023 - 3112 B	BDL	0.5 - 1000	1.0	No Relaxation
25	Lead as Pb	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.01 - 10	0.01	No Relaxation
24	Cadmium as Cd	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.003 - 2.0	0.003	No Relaxation
23	Zinc as Zn	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	0.44	0.05 - 15	5	15

BDL=Below Detection Limit

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

ETRC warrants that all analytical work is conducted professionally in accordance with all applicable standard laboratory practices and that this data reflects our best
attempt to generate accurate results for the sample, mentioned in the report as above.

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Complain register is a validable in our laboratory.

Authorized Signatory (Sandeep Kr Verma) Lab-Incharge CHECKED CHECKED OF SEARCH

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/1611/12647/2023	Date of Report: 16.11.2023
Name /Address/Type of Industry	M/s Dhampur Bio-organics Limited
	Unit: Asmoli, Division Sugar
	Village: Asmoli
	Tehsil: & District: Sambhal (U.P.) - 244304

SAMPLE DETAILS

1	Water/ Waste Water	Ground Water	5	Packing Condition	Sealed
2	Sample Description	Borewell Water	6	Sample Collected By	Industry self
3	Sample received date	10.11.2023	7	Analysis Start Date	10.11.2023
4	Sample Quantity	5.0 liters	8	Analysis End Date	15.11.2023

TEST RESULT

Sr.	Test Parameter	Unit	Protocol/Test Method	Result	Range of testing	Indian Standard 10500: 2012	
No	rest i di diffetei	Onne	1 Totodow Test Medilou	Result	/limit of detection	Desirable	Permissible
			Physico-chemical Parar	meters			
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 th Ed. 2023 - 4500 H ⁺	7.4	1 - 14	6.5-8.5	No Relaxation
4	Turbidity	NTU	APHA 24 th Ed. 2023 - 2130 B	BDL	2 - 40	1	5
5	Total Dissolved Solids (TDS)	mg/l	IS: 3025 (Part-16): 2023	362.4	10 - 5000	500	2000
6	Ammonia (as total ammonia-N)	mg/l	APHA 24 th Ed. 2023 - 4500-NH ₃ F	BDL	0.5 - 2.0	0.5	No Relaxation
7	Anionic Detergents (as MBAS)	mg/l	APHA 24 th 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	49.6	2.0 - 600	75	200
9	Magnesium as Mg	mg/l	APHA 24 th Ed. 2023 - 3500 Mg, B	23.32	0.1 - 200	30	100
10	Chloride as Cl	mg/l	APHA 24 th Ed. 2023 - 4500-Cl B	24.0	2.0 - 2000	250	1000
11	Fluoride as F	mg/l	APHA 24 th Ed. 2023 - 4500 F ⁻ C	0.29	0.02 - 5.0	1.0	1.5
12	Free Residual Chlorine	mg/l	IS: 3025 (Part-26): 1986 Reaffirmed: 2019	BDL	0.1 - 5.0	0.2	1.0
13	Nitrate as NO ₃	mg/l	IS: 3025 (Part-34): 1986 Reaffirmed: 2019	BDL	1.0 - 70	45	No Relaxation
14	Phenolic Compound (as C ₆ H ₅ OH)	mg/l	APHA 24 th Ed. 2023 - 5530 C	BDL	0.001 - 0.005	0.001	0.002
15	Sulphate as SO ₄	mg/l	APHA 24 th Ed. 2023 - 4500- SO ₄ ²⁻	28.0	1.0 - 500	200	400
16	Alkalinity as CaCO ₃	mg/l	APHA 24 th Ed. 2023 - 2320 B	248.0	2.0 - 1000	200	600
1.7	Total Hardness as CaCO ₃	mg/l	APHA 24 th Ed. 2023 - 2340 C	220.0	5.0 - 800	200	600
18	Aluminium as Al	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.015 - 5.0	0.03	0.2
19	Boron as B	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.05 - 2.0	0.5	1.0
20	Copper as Cu	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.03 - 10	0.05	1.5
21	Iron as Fe	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	0.11	0.05 - 20	0.3	No Relaxation
22	Manganese as Mn	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	0.03	0.02 - 5.0	0.1	0.3

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Test Report Ref No. ETRC/1611/12647/2023

23	Zinc as Zn	mg/l	APHA 24 th Ed. 2023 - 3120 B	0.94	0.05 - 15	5	15
20	Zille do Zil	mg/i	(ICP-OES)	0.54	0.00 - 10	3	10
24	Cadmium as Cd	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.003 - 2.0	0.003	No Relaxation
25	Lead as Pb	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.01 - 10	0.01	No Relaxation
26	Mercury as Hg	μg/l	APHA 24 th Ed. 2023 - 3112 B	BDL	0.5 - 1000	1.0	No Relaxation
27	Nickel as Ni	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.02 - 5.0	0.02	No Relaxation
28	Arsenic as As	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.02 - 2.0	0.01	0.05
29	Total Chromium	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.03 - 5.0	0.05	No Relaxation
			Microbiological Param	neters			
30	E. coli	MPN/	IS: 1622 - 1981	Absent	1.8 - 1600	Shall not be	e detected in any
30	E. COII	100 ml	Reaffirmed: 2019	Ausent	1.6 - 1600		ml sample
31	T. coli	MPN/	IS: 1622 - 1981	Absent	1.8 - 1600	Shall not be	e detected in any
31	1. 0011	100 ml	Reaffirmed: 2019	Absent	1.0 - 1000	100 ml sample	

BDL=Below Detection Limit

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

ETRC warrants that all analytical work is conducted professionally in accordance with all applicable standard laboratory practices and that this data reflects our best
attempt to generate accurate results for the sample, mentioned in the report as above.

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Authorized Signatory (Sandeep Kr Verma) Lab-Incharge CHECKED CHECKED

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/1412/12648/2023	Date of Report: 14.12.2023
Name /Address/Type of Industry	M/s Dhampur Bio-organics Limited
	Unit: Asmoli, Division Sugar
	Village: Asmoli
	Tehsil: & District: Sambhal (U.P.) - 244304

SAMPLE DETAILS

1	Water/ Waste Water	Ground Water	5	Packing Condition	Sealed
2	Sample Description	Borewell Water	6	Sample Collected By	Industry self
3	Sample received date	08.12.2023	7	Analysis Start Date	08.12.2023
4	Sample Quantity	5.0 liters	8	Analysis End Date	13.12.2023

TEST RESULT

Sr.	Test Parameter	Unit	Protocol/Test Method	Result	Range of testing		Standard 0: 2012
No	rest rarameter	Oint			/limit of detection	Desirable	Permissible
			Physico-chemical Parai	meters			
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 th Ed. 2023 - 4500 H ⁺	7.5	1 - 14	6.5-8.5	No Relaxation
4	Turbidity	NTU	APHA 24 th Ed. 2023 - 2130 B	BDL	2 - 40	11	5
5	Total Dissolved Solids (TDS)	mg/l	IS: 3025 (Part-16): 2023	348.0	10 - 5000	500	2000
6	Ammonia (as total ammonia-N)	mg/l	APHA 24 th Ed. 2023 - 4500-NH ₃ F	BDL	0.5 - 2.0	0.5	No Relaxation
7	Anionic Detergents (as MBAS)	mg/l	APHA 24 th 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 th Ed. 2023 - 3500 Mg, B	25.27	0.1 - 200	30	100
10	Chloride as Cl	mg/l	APHA 24th Ed. 2023 - 4500-Cl B	22.0	2.0 - 2000	250	1000
11	Fluoride as F	mg/l	APHA 24 th Ed. 2023 - 4500 F ⁻ 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 ₃	mg/l	IS: 3025 (Part-34): 1986 Reaffirmed: 2019	BDL	1.0 - 70	45	No Relaxation
14	Phenolic Compound (as C ₆ H ₅ OH)	mg/i	APHA 24 th Ed. 2023 - 5530 C	BDL	0.001 - 0.005	0.001	0.002
15	Sulphate as SO ₄	mg/l	APHA 24 th Ed. 2023 - 4500- SO ₄ ²⁻	20.0	1.0 - 500	200	400
16	Alkalinity as CaCO ₃	mg/l	APHA 24 th Ed. 2023 - 2320 B	252.0	2.0 - 1000	200	600
17	Total Hardness as CaCO ₃	mg/l	APHA 24 th Ed. 2023 - 2340 C	232.0	5.0 - 800	200	600
18	Aluminium as Al	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.015 - 5.0	0.03	0.2
19	Boron as B	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.05 - 2.0	0.5	1.0
20	Copper as Cu	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.03 - 10	0.05	1.5
21	Iron as Fe	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	0.09	0.05 - 20	0.3	No Relaxation
22	Manganese as Mn	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	0.04	0.02 - 5.0	0.1	0.3

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Test Report Ref No. ETRC/1412/12648/2023

31	T. coli	MPN/ 100 ml	IS: 1622 - 1981 Reaffirmed: 2019	Absent	1.8 - 1600		e detected in any ml sample
30	E. coli	MPN/ 100 ml	IS: 1622 - 1981 Reaffirmed: 2019	Absent	1.8 - 1600	100	e detected in any ml sample
			Microbiological Param	eters			
29	Total Chromium	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.03 - 5.0	0.05	No Relaxation
28	Arsenic as As	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.02 - 2.0	0.01	0.05
27	Nickel as Ni	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.02 - 5.0	0.02	No Relaxation
26	Mercury as Hg	µg/l	APHA 24 th Ed. 2023 - 3112 B	BDL	0.5 - 1000	1.0	No Relaxation
25	Lead as Pb	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.01 - 10	0.01	No Relaxation
24	Cadmium as Cd	mg/l·	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.003 - 2.0	0.003	No Relaxation
23	Zinc as Zn	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	0.33	0.05 - 15	5	15

BDL=Below Detection Limit

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

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Authorized Signatory (Sandeep Kr Verma) Lab-Incharge CHECKED Season

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/2301/12649/2024	Date of Report: 23.01.2024
Name /Address/Type of Industry	M/s Dhampur Bio-organics Limited
	Unit: Asmoli, Division Sugar
	Village: Asmoli
	Tehsil: & District: Sambhal (U.P.) - 244304

SAMPLE DETAILS

1	Water/ Waste Water	Ground Water	5	Packing Condition	Sealed
2	Sample Description	Borewell Water	6	Sample Collected By	Industry self
3	Sample received date	17.01.2024	7	Analysis Start Date	17.01.2024
4	Sample Quantity	5.0 liters	8	Analysis End Date	22.01.2024

TEST RESULT

Sr.	Test Parameter	Unit	Protocol/Test Method	Result	Range of testing	Indian Standard 10500: 2012	
No	root raramotor	Ome	1 Totobon Test Method	Result	/limit of detection	Desirable	Permissible
			Physico-chemical Para	meters			
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	рН	-	APHA 24 th Ed. 2023 - 4500 H ⁺	7.5	1 - 14	6.5-8.5	No Relaxation
4	Turbidity	NTU	APHA 24 th Ed. 2023 - 2130 B	BDL	2 - 40	1	5
5	Total Dissolved Solids (TDS)	mg/l	IS: 3025 (Part-16): 2023	374.0	10 - 5000	500	2000
6	Ammonia (as total ammonia-N)	mg/l	APHA 24 th Ed. 2023 - 4500-NH ₃ F	BDL	0.5 - 2.0	0.5	No Relaxation
7	Anionic Detergents (as MBAS)	mg/l	APHA 24 th 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	49.6	2.0 - 600	75	200
9	Magnesium as Mg	mg/l	APHA 24 th Ed. 2023 - 3500 Mg, B	22.35	0.1 - 200	30	100
10	Chloride as Cl	mg/l	APHA 24 th Ed. 2023 - 4500-Cl ⁻ B	24.0	2.0 - 2000	250	1000
11	Fluoride as F	mg/l	APHA 24 th Ed. 2023 - 4500 F ⁻ C	0.19	0.02 - 5.0	1.0	1.5
12	Free Residual Chlorine	mg/l	IS: 3025 (Part-26): 1986 Reaffirmed: 2019	BDL	0.1 - 5.0	0.2	1.0
13	Nitrate as NO ₃	mg/l	IS: 3025 (Part-34): 1986 Reaffirmed: 2019	BDL	1.0 - 70	45	No Relaxation
14	Phenolic Compound (as C ₆ H ₅ OH)	mg/l	APHA 24 th Ed. 2023 - 5530 C	BDL	0.001 - 0.005	0.001	0.002
15	Sulphate as SO ₄	mg/l	APHA 24 th Ed. 2023 - 4500- SO ₄ ²⁻	26.0	1.0 - 500	200	400
16	Alkalinity as CaCO ₃	mg/l	APHA 24 th Ed. 2023 - 2320 B	236.0	2.0 - 1000	200	600
17	Total Hardness as CaCO ₃	mg/l	APHA 24 th Ed. 2023 - 2340 C	216.0	5.0 - 800	200	600
18	Aluminium as Al	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.015 - 5.0	0.03	0.2
19	Boron as B	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.05 - 2.0	0.5	1.0
20	Copper as Cu	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.03 - 10	0.05	1.5
21	Iron as Fe	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	0.13	0.05 - 20	0.3	No Relaxation
22	Manganese as Mn	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	0.02	0.02 - 5.0	0.1	0.3

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Test Report Ref No. ETRC/2301/12649/2024

100	st iteport iter ito.	L11(0/200					
23	Zinc as Zn	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	0.24	0.05 - 15	5	15
24	Cadmium as Cd	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.003 - 2.0	0.003	No Relaxation
25	Lead as Pb	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.01 - 10	0.01	No Relaxation
26	Mercury as Hg	µg/l	APHA 24 th Ed. 2023 - 3112 B	BDL	0.5 - 1000	1.0	No Relaxation
27	Nickel as Ni	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.02 - 5.0	0.02	No Relaxation
28	Arsenic as As	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.02 - 2.0	0.01	0.05
29	Total Chromium	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.03 - 5.0	0.05	No Relaxation
		1	Microbiological Param	neters			
30	E. coli	MPN/ 100 ml	IS: 1622 - 1981 Reaffirmed: 2019	Absent	1.8 - 1600		e detected in any
31	T. coli	MPN/ 100 ml	IS: 1622 - 1981 Reaffirmed: 2019	Absent	1.8 - 1600	Shall not be detected in any 100 ml sample	

BDL=Below Detection Limit

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

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Authorized Signatory (Sandeep Kr Verma) Lab-Incharge CHECKED CHECKED Pessearch

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/2002/12650/2024	Date of Report: 20.02.2024
Name /Address/Type of Industry	M/s Dhampur Bio-organics Limited
	Unit: Asmoli, Division Sugar
	Village: Asmoli
	Tehsil: & District: Sambhal (U.P.) - 244304

SAMPLE DETAILS

1	Water/ Waste Water	Ground Water	5	Packing Condition	Sealed	
2	Sample Description	Borewell Water	6	Sample Collected By	Industry self	
3	Sample received date	14.02.2024	7	Analysis Start Date	14.02.2024	
4	Sample Quantity	5.0 liters	8	Analysis End Date	19.02.2024	

TEST RESULT

Sr.	Test Parameter	Unit	Protocol/Test Method	Result	Range of testing		Standard 0: 2012
No	rost i didilictor	Oilit	1 Totocom Test Method	Nesult	/limit of detection	Desirable	Permissible
			Physico-chemical Parai	meters			
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 th Ed. 2023 - 4500 H ⁺	7.4	1 - 14	6.5-8.5	No Relaxation
4	Turbidity	NTU	APHA 24 th Ed. 2023 - 2130 B	BDL	2 - 40	1	5
5	Total Dissolved Solids (TDS)	mg/l	IS: 3025 (Part-16): 2023	385.6	10 - 5000	500	2000
6	Ammonia (as total ammonia-N)	mg/l	APHA 24 th Ed. 2023 - 4500-NH ₃ F	BDL	0.5 - 2.0	0.5	No Relaxation
7	Anionic Detergents (as MBAS)	mg/l	APHA 24 th 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 th Ed. 2023 - 3500 Mg, B	21.38	0.1 - 200	30	100
10	Chloride as Cl	mg/l	APHA 24 th Ed. 2023 - 4500-Cl ⁻ B	28.0	2.0 - 2000	250	1000
11	Fluoride as F	mg/l	APHA 24 th Ed. 2023 - 4500 F ⁻ C	0.22	0.02 - 5.0	1.0	1.5
12	Free Residual Chlorine	mg/l	IS: 3025 (Part-26): 1986 Reaffirmed: 2019	BDL	0.1 - 5.0	0.2	1.0
13	Nitrate as NO ₃	mg/l	IS: 3025 (Part-34): 1986 Reaffirmed: 2019	BDL	1.0 - 70	45	No Relaxation
14	Phenolic Compound (as C ₆ H ₅ OH)	mg/l	APHA 24 th Ed. 2023 - 5530 C	BDL	0.001 - 0.005	0.001	0.002
15	Sulphate as SO ₄	mg/l	APHA 24 th Ed. 2023 - 4500- SO ₄ ² -	24.0	1.0 - 500	200	400
16	Alkalinity as CaCO ₃	mg/l	APHA 24 th Ed. 2023 - 2320 B	252.0	2.0 - 1000	200	600
17	Total Hardness as CaCO₃	mg/l	APHA 24 th Ed. 2023 - 2340 C	220.0	5.0 - 800	200	600
18	Aluminium as Al	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.015 - 5.0	0.03	0.2
19	Boron as B	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.05 - 2.0	0.5	1.0
20	Copper as Cu	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.03 - 10	0.05	1.5
21	Iron as Fe	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	0.17	0.05 - 20	0.3	No Relaxation
22	Manganese as Mn	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	0.03	0.02 - 5.0	0.1	0.3

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Test Report Ref No. ETRC/2002/12650/2024

163	st Report Rei No.	LINOIZO					
23	Zinc as Zn	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	0.52	0.05 - 15	5	15
24	Cadmium as Cd	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.003 - 2.0	0.003	No Relaxation
25	Lead as Pb	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.01 - 10	0.01	No Relaxation
26	Mercury as Hg	μg/l	APHA 24 th Ed. 2023 - 3112 B	BDL	0.5 - 1000	1.0	No Relaxation
27	Nickel as Ni	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.02 - 5.0	0.02	No Relaxation
28	Arsenic as As	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.02 - 2.0	0.01	0.05
29	Total Chromium	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.03 - 5.0	0.05	No Relaxation
			Microbiological Param	eters	4,4		
30	E. coli	MPN/ 100 ml	IS: 1622 - 1981 Reaffirmed: 2019	Absent	1.8 - 1600		e detected in any ml sample
31	T. coli	MPN/ 100 ml	IS: 1622 - 1981 Reaffirmed: 2019	Absent	1.8 - 1600		e detected in any 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
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Authorized Signatory (Sandeep Kr Verma) Lab-Incharge CHECKED CHECKED PESCENTION OF THE PROPERTY OF

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/1903/12651/2024	Date of Report: 19.03.2024
Name /Address/Type of Industry	M/s Dhampur Bio-organics Limited
-	Unit: Asmoli, Division Sugar
	Village: Asmoli
	Tehsil: & District: Sambhal (U.P.) - 244304

SAMPLE DETAILS

1	Water/ Waste Water	Ground Water	5	Packing Condition	Sealed	
2	Sample Description	Borewell Water	6	Sample Collected By	Industry self	
3	Sample received date	13.03.2024	7	Analysis Start Date	13.03.2024	
4	Sample Quantity	5.0 liters	8	Analysis End Date	18.03.2024	

TEST RESULT

Sr. No	Test Parameter	Unit F	Protocol/Test Method	Result	Range of testing /limit of detection	Indian Standard 10500: 2012	
			Protocol/rest Method			Desirable	Permissible
			Physico-chemical Para	meters	h	A)	
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 th Ed. 2023 - 4500 H ⁺	7.5	1 - 14	6.5-8.5	No Relaxation
4	Turbidity	NTU	APHA 24 th Ed. 2023 - 2130 B	BDL	2 - 40	1	5
5	Total Dissolved Solids (TDS)	mg/l	IS: 3025 (Part-16): 2023	376.4	10 - 5000	500	2000
6	Ammonia (as total ammonia-N)	mg/l	APHA 24 th Ed. 2023 - 4500-NH ₃ F	BDL	0.5 - 2.0	0.5	No Relaxation
7	Anionic Detergents (as MBAS)	mg/l	APHA 24 th 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	54.4	2.0 - 600	75	200
9	Magnesium as Mg	mg/l	APHA 24 th Ed. 2023 - 3500 Mg, B	24.3	0.1 - 200	30	100
10	Chloride as Cl	mg/l	APHA 24 th Ed. 2023 - 4500-Cl ⁻ B	24.0	2.0 - 2000	250	1000
11	Fluoride as F	mg/l	APHA 24 th Ed. 2023 - 4500 F ⁻ C	0.25	0.02 - 5.0	1.0	1.5
12	Free Residual Chlorine	mg/l	IS: 3025 (Part-26): 1986 Reaffirmed: 2019	BDL	0.1 - 5.0	0.2	1.0
13	Nitrate as NO ₃	mg/l	IS: 3025 (Part-34): 1986 Reaffirmed: 2019	BDL	1.0 - 70	45	No Relaxation
14	Phenolic Compound (as C ₆ H ₅ OH)	mg/l	APHA 24 th Ed. 2023 - 5530°C	BDL	0.001 - 0.005	0.001	0.002
15	Sulphate as SO ₄	mg/l	APHA 24 th Ed. 2023 - 4500- SO ₄ ²⁻	20.0	1.0 - 500	200	400
16	Alkalinity as CaCO ₃	mg/l	APHA 24 th Ed. 2023 - 2320 B	260.0	2.0 - 1000	200	600
17	Total Hardness as CaCO ₃	mg/l	APHA 24 th Ed. 2023 - 2340 C	236.0	5.0 - 800	200	600
18	Aluminium as Al	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.015 - 5.0	0.03	0.2
19	Boron as B	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.05 - 2.0	0.5	1.0
20	Copper as Cu	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.03 - 10	0.05	1.5
21	Iron as Fe	mg/i	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	80.0	0.05 - 20	0.3	No Relaxation
22	Manganese as Mn	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	0.05	0.02 - 5.0	0.1	0.3

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Test Report Ref No. ETRC/1903/12651/2024

31	T. coli	MPN/ 100 ml	IS: 1622 - 1981 Reaffirmed: 2019	Absent	1.8 - 1600	Shall not be detected in any 100 ml sample	
		100 ml	Reaffirmed: 2019		1000	100 ml sample	
30	E. coli	MPN/	IS: 1622 - 1981	Absent	1.8 - 1600	Shall not be detected in any	
			Microbiological Param	neters			
29	Total Chromium	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.03 - 5.0	0.05	No Relaxation
28	Arsenic as As	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.02 - 2.0	0.01	0.05
27	Nickel as Ni	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.02 - 5.0	0.02	No Relaxation
26	Mercury as Hg	μg/l	APHA 24 th Ed. 2023 - 3112 B	BDL	0.5 - 1000	1.0	No Relaxation
25	Lead as Pb	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.01 - 10	0.01	No Relaxation
24	Cadmium as Cd	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.003 - 2.0	0.003	No Relaxation
23	Zinc as Zn	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	0.66	0.05 - 15	5	15

BDL=Below Detection Limit

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

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Authorized Signatory (Ritu Garg) QM

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